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Educational News and Editorial Comment

"THE NORTH CENTRAL ASSOCIATION QUARTERLY"

The following editorial announcement is quoted from the first issue of the new periodical which is the official organ of the North Central Association of Colleges and Secondary Schools.

At the recent meeting of the North Central Association of Colleges and Secondary Schools held in Chicago, March 17 to 20, 1926, the association voted to undertake the publication of a quarterly magazine. This publication is to take the place of the previously issued *Proceedings* and to be the organ of official communication among the association's members.

To carry out the project, an editorial board consisting of seven individuals was created. This board is to be composed of the president, the secretary, and the treasurer of the association; of the three secretaries of the commissions of the association; and of a managing editor elected from the membership of the association by the six individuals thus specifically designated.

In accordance with the authorization, the six ex-officio members mentioned above met immediately following the action of the association and elected as managing editor, Calvin O. Davis, professor of secondary education in the University of Michigan and ex-secretary of the Commission on Secondary Schools in the association.

Clearly it is too early as yet to decide fully what shall be the fixed policies and procedures of the editorial staff. Time and experience must guide. However, the following standards have, at least tentatively, been set as ideals:

1. To entitle the magazine the *North Central Association Quarterly*.

2. To issue the four numbers respectively on the first day of June, September, December, and March.
3. To have each issue contain approximately 150 pages of material.
4. To include in the June number such portions of the proceedings of the March meetings as are of immediate interest to school authorities. This material will include the revised standards for approving schools and colleges, lists of the approved institutions, the official roster of the association, and excerpts from the secretaries' reports.

The September issue will contain the reports of some of the special studies made by the association during the year; the December issue will include many of the formal addresses delivered at the annual meeting; and the March issue, which will be anticipatory of the annual meeting, will contain the program of the meeting, information pertaining to procedures, preliminary statistical tabulations which may be needed in guiding discussions in the meeting, and other similar material.

5. To include in each issue brief notes and editorials pertinent to North Central Association matters.

6. To refrain absolutely from seeking to develop the *Quarterly* into merely another general educational magazine but on the contrary to center all efforts in making it truly an effective integrating agency for the association.

The subscription price of the *North Central Association Quarterly* is \$5.00 a year. It is sent gratis to all members of the association, and a special subscription price of \$3.00 a year is announced for school, college, and public libraries.

The method which the association has thus adopted of giving publicity to its proceedings is in keeping with its traditions as the oldest and largest of the regional standardizing agencies. The North Central Association has flourished in the section of the United States in which the certification plan of admission to college has drawn the colleges and secondary schools into the most intimate co-operative relations. It has been a leader in the preparation of lists of approved high schools and colleges. In establishing a periodical, it has taken a step which is most promising for higher education. There is great need for wider and more vigorous discussion of the problems of high schools and colleges.

ADJUSTING STUDENTS TO THEIR ENVIRONMENT

Educational institutions are very generally recognizing it as a part of their duty to help new students to adjust themselves to their social and institutional environments. Freshman Week has become

a generally recognized device for bridging the gap between high school and college. Orientation courses for new students are now common in colleges and high schools.

The high school of Winfield, Kansas, publishes a manual which contains information needed by pupils and provides at the same time a body of material that can be used for regular exercises in the home-room study period. The manual is entitled, *Manual of Activities and Administration and the Outline of Home Room Study and Activity*. The purpose of the book is described in the following statement.

This manual has been prepared primarily to give an outline of home-room study for each home room in the Winfield Junior-Senior High School. Such other information is included as parents, pupils, and instructors would wish to have regarding the routine and activities of the school. Every part of the book seems to be a direct answer to one of the seven cardinal objectives of secondary education—health, command of fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure time, and ethical character—and also the suggested eighth objective which was proposed by Principal L. W. Brooks, of Wichita, while he was president of the National Association of Secondary School Principals—international understanding.

Orientation of the pupil is conceived of in broad terms in the course outlined. For example, in the eighth grade some weeks are devoted to courtesy and manners in the home. In the eleventh year several weeks are devoted to a study of dress and social behavior. Among the other subjects taken up are the public library and its use, eminent biologists and their contributions, advertising, and individual incomes and budgets.

The spirit of social adjustment which is manifested by such exercises as are arranged in the Winfield manual will inevitably pervade the school and sooner or later will cultivate a temper of toleration and helpfulness in all the undertakings of the institution. That something of this kind has happened as a result of the effort to adjust students in one of the state universities is indicated in the following item from a Denver paper.

Freshmen at the University of Colorado in the future will probably have a longer period in which to make good as the result of a new plan tried for the first time this year through which forty-nine Freshmen who, under the old rule, would have been dropped, are continuing their studies. No lowering of requirements has been made under the new rule, but more time has been provided in

which Freshmen may become oriented to university life and to the problems of the classroom and laboratory. Under the rule for continuance as a student in the university, a student must make passing marks in eight hours out of a full schedule of fifteen hours, and under this rule many Freshmen in the past have found their university careers temporarily or permanently terminated at the close of the fall quarter.

Last year in the College of Arts and Sciences, all Freshmen regardless of marks earned, except a few who manifestly did not deserve another chance, were allowed to go on with the winter quarter's work under the stipulation that in that quarter they must make passing marks in courses totaling ten hours or must bring the total for the two quarters up to sixteen hours. In the College of Engineering all Freshmen were allowed to continue their studies, the only stipulation being that they successfully pass courses totaling at least eight hours during the winter quarter.

Under the new plan 60 per cent of the Freshmen in both the College of Arts and Sciences and the College of Engineering who would have been dropped under the old system successfully met the stipulations during the winter quarter.

"The new plan seems to be very successful," said Professor Philip G. Worcester, dean of men. "On the face of the results, it is quite clear that one quarter does not provide sufficient time for a student to become thoroughly oriented to university life and to the problems of the classroom and laboratory. The results in the two schools are, in my opinion, very encouraging, and I think the new plan should be continued, at least for a number of years until experience proves it to be as successful as this first test of it indicates or until we discover weaknesses in it which we cannot now see."

A HIGHER HIGH SCHOOL

Henry S. Pritchett, of the Carnegie Foundation for the Advancement of Teaching, takes the opportunity each year in his annual report to reiterate in one form or another his belief that American education is of low grade and that something new should be devised. In his last report he cites figures to show the large proportion of American young people attending high school and argues that the high schools are not sufficiently selective. He then suggests a new type of school.

The following summary is quoted from the circular of information issued at the time the report appeared.

In competition and objectiveness, sports and games are "perhaps the most genuinely educative features that our schools at present possess," is the judgment of Dr. Henry S. Pritchett, in his twentieth report as president of the Carnegie Foundation. "The sports program involves throughout the selection

and pitting of merit against merit in open, interesting struggle. Manage sports as we do our studies; minimize exact achievement, and measure a contestant by his 'effort' not by his success; invite a pupil to compete chiefly 'with himself'; make up teams alphabetically instead of by rigorous selection; keep chronic failures always on the squad; finally, to everyone who can jump the bar at two feet give the same medal as marks the finished athlete; and the significance and exhilaration that now attach to these exercises would rapidly ooze away."

"An education is normally, and we believe rightfully, conceived to be for those who can learn and who desire to learn. Such a function is in the highest degree selective. What has brought it to pass that our schools and colleges today are literally overwhelmed with persons who neither can learn nor desire to learn? As attendance has relatively increased, the average of ability has sensibly diminished, and the will to learn has weakened still faster." Intellectual competition has gone. Released from its genuine demands, "an abounding student energy has raised a crop of general activities that have not only subordinated the main task but to a very great extent, both in public and in student opinion, have assumed the crown of sanction for the whole process. We bewail the fact and seek to 'regulate' student activities without perceiving that, if what we still believe to be the major operation were cunningly carried out, the others would of themselves fall into the proper perspective."

Dr. Pritchett points out that the United States is endeavoring to give high-school training to four or five times as many of its young people as England and to from six to ten times as many as Prussia.

In 1922 there were 32.6 per cent of the boys and 37.4 per cent of the girls of ages fifteen to eighteen, inclusive, in public and private four-year secondary schools in the United States.

In 1921 the proportions of persons fifteen to eighteen years of age who were enjoying full-time educational advantages in England were 6.9 per cent of the boys and 7.5 per cent of the girls. Adding the proportion reported as doing part-time work, these figures are increased to 8.5 per cent and 8.8 per cent. Of fifteen-year-old boys and girls, 14 per cent attend a school of some sort in England as compared with 74 per cent in the United States.

In 1922 the pupils attending public and private higher secondary schools in Prussia, in the four grades corresponding to the ages fifteen to eighteen, inclusive, numbered 5.4 per cent of the boys and 3.4 per cent of the girls.

"The foremost need of American secondary education," suggests Dr. Pritchett, "is the frank establishment, at the top of each considerable school system, of a school or a division that shall embody, for those capable of profiting by it, the best we know in the process of education for this period of life. It should copy no other known institution, but, taking advantage of the principles to which other great schools have owed their success, it should produce under our conditions a type of intellectual discipline that will be fully worthy to rank with these.

"The main object of this departure from our customary practice is not to satisfy a few bright minds, still less to compete with European schools; it is chiefly to set up a scale of values in education that will bring order into our confused ideas as to what clear and serious thinking is and can do. Although we deplore the second- and third-rate intellectual performance that passes all about us for adequate education, we have as yet failed to create the conditions that will make anything else possible."

THE ETHICS OF TEXTBOOK-MAKING

The *New Republic* raises an interesting question in an editorial which deals with the methods adopted in Texas of eliminating references to evolution from the school textbooks. The question of textbook ethics involves more than the experiences and interests of Texas. The time will doubtless come when authors who are specialists in science will not allow themselves to be dictated to by textbook commissions or politicians of any stripe. At the present time the historians and biologists are confronted more than is any other group with the problem of deciding between professional honesty and royalties. It is to be hoped that the educational profession will learn from the sad exhibition made in Texas and elsewhere that schools will never be respectable until they reach the point where they regard truth more highly than they do commercial profit.

The editorial from the *New Republic* is as follows:

The *New York World* calls attention to a situation arising in consequence of the action of the Texas legislature against the teaching of evolution. By request of the State Textbook Commission, alterations have been made in biological works to fit them for Texas consumption. In Moon's *Biology for Beginners*, published by Henry Holt and Company, four chapters dealing with the evolution of man have been cut out, and the word "evolution" has been replaced throughout by "development." In *Healthful Living*, by Jesse Feiring Williams, published by the Macmillan Company, changes in the text have been made to avoid the use of the hateful word; for example, "Animals in their evolution from lower to higher forms of life have increased their power to move about" has been changed to "Through the many generations of their existence animals have increased," etc.

An interesting question arises as to the ethical responsibility of authors and publishers. If, as Ruskin thought, there is a point of honor characteristic of every profession, which bids the soldier die rather than desert his post, the lawyer die rather than do or connive at injustice, the teacher die rather than disseminate error, clearly authors and publishers of textbooks should die so far as Texas is concerned. But obviously Texas will then develop her own school

of thought and write her own textbooks. A boycott of Texas by all men and women of learning would leave the field to the local intelligentsia, with results which can be imagined. Organized invasion of the state by intellectual forces would merely stiffen its resistance. National legislation in behalf of freedom of teaching would surely provoke the historic southern response of nullification. On the whole, the only feasible remedy seems to be intellectual bootlegging, by which the law can be turned against the very policy which it tries to define. Martyrs to truth may yet flourish in Texas.

AN EXPERIMENTAL COLLEGE

The University of Wisconsin issues the following announcement.

An experimental college, to test new curriculums and teaching methods for the first two years of the college course, will be started in September, 1927, as a part of the College of Letters and Science of the University of Wisconsin.

The plan of such an experiment was submitted to the faculty as the first proposal of the All-University Study Commission, recently appointed by President Glenn Frank, and will be one of the most distinctive experiments undertaken by any university in recent years. Many elements in the plan were suggested by Dr. Alexander Meiklejohn, former president of Amherst College, who recently joined the Wisconsin faculty and is one of the seven deans and professors composing the study commission.

The college will open with a student body of 125 Freshmen. In the fall of 1928, another class of 125 Freshmen will be admitted, and the first class of 125 will be carried through the sophomore year, so that the student body will number 250 during 1928-29. At the outset, the college will admit only men students who enrol voluntarily.

The students will live together in the new men's dormitories now being built on the shore of Lake Mendota. Much of their class work will be carried on under the tutorial system. Instruction will be by a special faculty headed by Professor Meiklejohn as director. The professor will devote two-thirds of his time to the experimental college and one-third to regular courses.

Although plans will not be fully matured for some time, it is likely that, in place of the regular college studies presented as separate units, the college will experiment with the suggestion of a year's intensive study of all angles of one great civilization. For example, the freshman year may be devoted to an ancient civilization, such as the Greek, and the sophomore year to a modern civilization, such as the English during the Nineteenth Century.

Students who successfully complete the two years of study will be admitted with full standing as Juniors in the College of Letters and Science. They must fulfil the regular language requirements, however, to complete the Bachelor of Arts degree.

WHAT IS RESEARCH?

The Bureau of Education has issued under the title, *Bibliography of Secondary Education Research, 1920-1925*, a bulletin which lists and describes briefly the articles and books relating to secondary education which appeared between 1920 and 1925. This is the first production sponsored by the National Committee on Research in Secondary Education, which was organized by the commissioner of education two years ago to serve as a clearing-house for the educational organizations which deal with high-school problems.

As one reads the titles and comments in this bulletin, one wonders whether the demand for fundamental research has yet secured adequate recognition in the minds of the members of the committee or of secondary-school teachers and principals. At least nine-tenths of the titles cited in the bulletin refer to purely descriptive accounts of what is going on in some department of some high school. It cannot be denied that the distribution of information about practical experiments in classrooms is very desirable and worthy of all possible encouragement. There is danger, however, that a certain complacency and consequent neglect of real research will result from the use of the word "research" to cover descriptive and trivial writings on educational matters.

There is too much ground for similar criticism of much of the university work which is called "educational research." The editor of the *School of Education Record of the University of North Dakota* recently recorded his views on this matter in the following editorial paragraphs.

We have heard much during the last few years of what is called "research." True and genuine research is one of the finest performances of human intelligence and ingenuity, but 99 per cent of the so-called "research" in both undergraduate and graduate work is far from "research." Indeed, much of it is a veritable "idol of the theatre." The work of some men is genuine research; but, where you find one such piece of work, you will find thousands and thousands of mediocre students who are kept busy collecting and collating, in small puttering ways and sometimes with the scissors, work that is passed off and palmed off in ponderous theses as "research." It would remind one of Carlyle's saying that "some people are noted for fussy littleness and an infinite deal of nothing." Professors set students to collecting data that might be gathered by an eighth-grade pupil and call it "research." The result is only what is of common knowl-

edge, and in most cases it leads nowhere. As someone has aptly said of such "research," "it is trying to find out for the hundredth time what everybody knows and then expressing it in language which nobody understands." Much of the so-called "research" work is absolute inflation, and the theses embodying it very soon find their place on musty and dusty shelves to be heard of no more.

One often wonders whether there is not so much pretension and inflation in the whole modern educational world that there is very likely to be a "blow-out" in the near future; it would suggest the truth of Aesop's fable of the frog. Nearly every institution and every department seems to be "playing" research in order to exploit itself in a public and advertising way; they must know that much of it is only a "game."

I know that, when one strikes at one extreme, one is likely to be accused of the other extreme by those who are unable to think straight, to infer sanely, and to interpret justly. It is only the sham work that I am hitting—there is nothing finer than genuine research and artistic expression and formulation.

Would it not be well for those who have undertaken to foster research to begin drawing a distinction between different types of contributions to educational literature? There are good articles on the content of courses; there are good articles on administrative devices. Should these not be listed as articles worth reading but containing no research? Would it not promote true scientific work to reserve the title "research" for publications which contribute to the understanding of fundamental principles?

RECENT DEVELOPMENTS IN TRAINING FOR LIBRARIANSHIP

The American Library Association has long been active in extending libraries, in improving their administration and position, and in fostering the training of children and adults inside and outside of school. This year marks the close of fifty years of its service to this American educational institution. For some time past the association has been giving special attention to the problems of training for librarianship; and, by means of grants from the Carnegie Corporation, it has been able to initiate some significant developments, among which are the creation of the Board of Education for Librarianship, the inspection and accrediting of library schools, the development of textbooks for library training, the institution of courses for teachers in library schools, the Charters investigation, and the new Graduate School of Librarianship at the University of Chicago.

Like other types of professional education, library training

sprang up at scattered centers. Too often it was on a low level; and, even where the standards were of the highest, it did not receive proper recognition. Much the same courses by title were given in the lower and higher schools. The Board of Education for Librarianship was created to study the field, to serve as a focus of ideas dealing with library training, and to transmit them to the field. It has been patient as a student and far-sighted as a guide. It has published its standards; the various schools have been rated; and the operation of the standards has served to improve the character of the training. There has also been an effect similar to that following the rating of colleges and secondary schools. Institutions have been able to secure better equipment and more adequate faculties and support. The board is still at work, and new standards for different lines of work are being prepared.

Library training in the past has suffered from a lack of proper textbooks. Only a few of the fundamental courses have suitable modern books. Through one of its committees, the American Library Association has been striving to remedy this condition. Several fields have been selected. Authors have been chosen and their work subsidized, and before long we may expect modern texts on such subjects as library administration and book selection. When the Charters investigation is completed, it is hoped that it will eventuate in additional textbooks and materials of instruction.

Up to the present there has been no specific preparation for teaching in library schools. Teachers in these schools, as in schools of law or medicine, have known their subjects but have had no pedagogical preparation. During August a series of advanced courses for teachers in library schools was given at the University of Chicago under a grant from the Carnegie Corporation to the American Library Association. Professor S. B. Mitchell, of the University of California, was in charge, and three professors from other institutions assisted him. The registration of some two score of the leading library-school teachers testifies to the professional interest of librarians.

The investigation now being carried on by a staff under the direction of Professor W. W. Charters, of the University of Chicago, holds unusual promise. It means that the American Library Association

no longer wishes to trust either to practical experience or to tradition, no matter how wise it may be. The practices of librarians are being studied in minute detail that objectives of training may be made clear and methods of obtaining these objectives may be found. The library profession is awaiting these results with keen anticipation. It is to be hoped that much progress will ensue.

The most outstanding development in library training is the establishment of the Graduate School of Librarianship at the University of Chicago. There has long been need of an institution in which leaders could be trained, in which advanced research could be carried on, in which specialties could be developed. This has now been made possible. All members of the library profession look eagerly to the new institution. They will watch the appointment of its faculty; they will fill its classrooms; they will use the results of its research.

These developments indicate that the library profession is alive to its task, that it sees the growing importance of a high type of training, and that it is taking steps to supply the need. What are now needed are, first, a fuller realization on the part of the public of the need of more training for librarians; second, a keener appreciation of the difference between the trained and the untrained librarian; and, finally, a willingness to assume the additional financial obligations necessary to secure the maximum benefits from the investments which have already been made.

WILLIAM F. RUSSELL

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

THE JUNIOR HIGH SCHOOL IN SOME CASES A TERMINUS OF EDUCATION

The New York City school authorities have prepared a circular of information to be distributed to the parents of pupils who will complete the sixth grade next spring. This circular sets forth in simple language the purposes of the junior high school. A summary of its contents is published by the *New York Sun* as follows:

"Please study this circular carefully before choosing a course for your child, as much valuable time is lost by making a wrong selection or by changing from one course to another after a selection has been made."

The circular concludes with the recommendation that, if parents are uncertain as to just what course a child should take, they should interview the principal of the nearest junior high school, "who will be very glad to discuss these courses with any parent who would like advice."

One matter that the circular makes plain is that the junior high school does not always prepare its pupils to continue in the senior high school. On the contrary, the courses are designed so that a pupil may choose any one of a half-dozen courses.

Three commercial courses are offered, two admitting the pupil to the commercial courses in the senior high school and one not preparing the pupil for admission to the senior high school at all. One of the former courses is especially adapted to pupils whose language and English work is weak.

Two general courses admit the graduates to the senior high school, one of them having the same provision for pupils weak in the English language that the special commercial course provides.

The industrial course admits the graduates only to the technical high schools or the secondary-grade vocational schools.

The so-called "adjustment" course is designed for over-age pupils desiring to do better than merely obtain an elementary certificate but unfitted for senior high school work. This course gives a strong foundation in the fundamentals of secondary schooling in addition to certain industrial work.

The circular gives the following interesting information and advice with regard to these courses.

"This variety of courses is offered so that the pupils may get the best possible preparation for their work in life.

"The general course prepares for the professions and should be taken only by those pupils who have good minds, who are not over-age for their grades, and whose families have the financial ability to keep them at school. If they leave the course before completing it, they have no special preparation for life and will fall behind those who are trained in the industrial or commercial courses. Even those who finish, face the probability of a small income for several years after leaving college.

"The commercial courses should be taken by persons wishing to do office work. This field is much overcrowded, and only those pupils who are specially fitted and specially well prepared for such work will succeed.

"The industrial course is not primarily to make milliners, dressmakers, etc., but to give the pupils a broad training along industrial lines so that, if they have the ability, they may be prepared to take the more responsible, higher-paid positions in those lines of industry for which they are specially adapted. A combination of skilful hands and a good general education puts a boy or girl in the way of earning a very good living."

FIRST YEARBOOK OF THE KANSAS HIGH SCHOOL
PRINCIPALS' ASSOCIATION

The Kansas High School Principals' Association has set an example which similar professional groups can very well follow. In publishing a yearbook which contains summaries of the papers and reports presented at the annual meeting, it has taken a step which will undoubtedly strengthen the organization and extend its influence. Three paragraphs may be quoted from the Foreword as an indication of the growth of a professional consciousness among the high-school principals of the state and as a record of past achievement.

The principal activities of our association since its organization have been the campaign for increased membership, the fight for better textbooks, the adoption of uniform transcripts, and the publication of a state yearbook. Our membership has been showing a steady growth. In 1922 we had 53 members; in 1923, 93 members; in 1924, 152 members; in 1925, 150. It is probable that a few have joined the national association directly so that we probably have 160 members at the present time.

We have co-operated with the State Teachers' Association and the State Textbook Commission in the effort to get better textbooks. We have succeeded in some instances and failed in others, but, on the whole, our work has been worth while. The efforts along this line should be continued until the principals secure direct representation on the textbook commission.

We have succeeded in getting a wide use of the uniform transcript blank recommended by the national association. In the past three years more than ten thousand of these blanks have been distributed by the secretary. There is no charge for this service to schools which are members of the state association.

SUBJECT COMBINATIONS IN HIGH-SCHOOL TEACHERS' PROGRAMS

THOMAS J. KIRBY
State University of Iowa

Much has been written in recent years on the problem of the professional education of students in training for teaching positions in the high school. Through state legislation, rulings of state departments of education, and the action of standardizing agencies, the amount of history of education, educational psychology, and high-school methods—those subjects that constitute the purely professional aspect of teacher-training—has been determined and attention has been directed to the content that should constitute the subject matter of these courses.

Another aspect of the problem of training high-school teachers needs to be scrutinized, namely, the combination of content subjects that prospective teachers will be asked to teach when they find themselves members of a high-school faculty. What subject or subjects will the student who has a major in English be asked to teach most frequently in addition to English? What subject or subjects will the student who has a major in history be asked to teach most frequently along with history? True enough, many teacher-training institutions do not directly control the training in content subjects given to prospective teachers, but this administrative accident does not remove their responsibility for those who are receiving training for teaching positions in the high school. If the content subjects are taught by the faculty of the liberal-arts college and the professional subjects are taught by the faculty of the college of education, the difficulty of obtaining a ready adjustment to the needs of teaching positions in the high school may be increased, but the responsibility is not removed. Those in charge of training high-school teachers—and here the writer would include those in charge of teaching the content subjects as well as those in charge of teaching the professional subjects—must employ the same means for deter-

mining the training to be given these teachers in the content subjects that has been advocated and practiced in the determination of training for positions in other vocational fields; that is, a critical analysis must be made of the jobs to which these prospective teachers aspire in order to find out just what combinations of content subjects will most frequently confront them.

The attention of the writer was called to the need of guidance for such college students through teaching each year for a period of years more than two hundred Seniors who were intending to be high-school teachers the following year. In many instances the student had chosen as his major subject in college some study that found no place in the high-school program of studies. In other instances the student had chosen a subject found in the high-school program but found only in combination with other subjects. To be able to teach this major subject meant that the student must also be able to teach one or more additional subjects always found with it in the high-school program of studies. In most instances no attention had been given to a minor subject.

In order to determine the actual combinations most frequently met by high-school teachers, the writer made a study of the programs of high-school teachers in the state of Iowa, with the intention not only of being able to guide prospective teachers in planning their content subjects but also of being able to furnish the job specifications to the group in charge of training these teachers.

The exact teaching programs of 1,478 teachers in Iowa high schools¹ were secured, distributed in such a way as to represent proportionately the high schools of various sizes in the state. For the purpose of this study the high schools were divided into four classes: Class I, schools with enrolments of 1,000 or more pupils; Class II, schools with enrolments from 500 to 999; Class III, schools with enrolments from 100 to 499; Class IV, schools with enrolments of 99 or less. The 1,478 teachers were distributed among the four classes as follows: Class I, 281 teachers; Class II, 332 teachers; Class III, 468 teachers; Class IV, 397 teachers. Evidence might be produced

¹ Thomas J. Kirby, *Subject Combinations in High School Teachers' Programs*. University of Iowa Extension Bulletin No. 136. College of Education Series No. 14. Iowa City, Iowa: University of Iowa, 1925. Pp. 48.

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The attention of the writer was called to the need of guidance for such college students through teaching each year for a period of years more than two hundred Seniors who were intending to be high-school teachers the following year. In many instances the student had chosen as his major subject in college some study that found no place in the high-school program of studies. In other instances the student had chosen a subject found in the high-school program but found only in combination with other subjects. To be able to teach this major subject meant that the student must also be able to teach one or more additional subjects always found with it in the high-school program of studies. In most instances no attention had been given to a minor subject.

In order to determine the actual combinations most frequently met by high-school teachers, the writer made a study of the programs of high-school teachers in the state of Iowa, with the intention not only of being able to guide prospective teachers in planning their content subjects but also of being able to furnish the job specifications to the group in charge of training these teachers.

The exact teaching programs of 1,478 teachers in Iowa high schools¹ were secured, distributed in such a way as to represent proportionately the high schools of various sizes in the state. For the purpose of this study the high schools were divided into four classes: Class I, schools with enrolments of 1,000 or more pupils; Class II, schools with enrolments from 500 to 999; Class III, schools with enrolments from 100 to 499; Class IV, schools with enrolments of 99 or less. The 1,478 teachers were distributed among the four classes as follows: Class I, 281 teachers; Class II, 332 teachers; Class III, 468 teachers; Class IV, 397 teachers. Evidence might be produced

¹ Thomas J. Kirby, *Subject Combinations in High School Teachers' Programs*. University of Iowa Extension Bulletin No. 136. College of Education Series No. 14. Iowa City, Iowa: University of Iowa, 1925. Pp. 48.

to show the adequacy of this sampling, but the reader is assured that a different selection which recognizes as this does the high schools in each class would alter the findings which follow only slightly. After the administrative officers who did some teaching were eliminated, there were left 1,190 teachers whose programs constitute the data for the following presentation.

Examination of the programs revealed at once the need of a basis of classification. A teacher was classified as a teacher of English if his program revealed more English than any other subject or combination of subjects. It could then be said that he taught English predominantly. Likewise, the subjects of second and third dominance in the programs were determined. The twelve following departments of instruction or groups of subjects were found in the programs: art, commercial education, education, English, foreign language, home economics, manual arts, mathematics, music, science, social studies, and physical education. In addition, teachers were assigned various administrative duties and supervision of extra-curriculum activities. Eighty different subjects were found with sufficient independence of organization to deserve recording.

Let us first look at the departments of instruction to see what combinations prevailed among them.

Of 1,190 teachers, 251, or 21 per cent, taught English predominantly. Of these 251 teachers, 52 per cent taught English only, while 48 per cent taught in some other group or groups of subjects. The subjects most frequently combined with English were social studies and Latin.

Of 1,190 teachers, 151, or 13 per cent, taught social studies predominantly. In the group of subjects called "social studies" belong history, civics, economics, sociology, and high-school geography. Of the 151 teachers who taught social studies predominantly, 64 per cent taught social studies only, while 36 per cent taught in one or more groups of subjects in addition. The field most commonly combined with social studies was English.

Of 1,190 teachers, 142, or 12 per cent, taught mathematics predominantly. Of these 142 teachers, 57 per cent taught mathematics only. The most frequent and the only outstanding combination with mathematics was science. No doubt, this combination is the

result of advice given by those who have been in charge of the guidance of college students preparing to teach mathematics in the high school. The chief problem here is how to advise the student to apportion his program between these two departments and still meet the other requirements imposed on him.

Of 1,190 teachers, 111, or 9 per cent, taught science predominantly. Of these 111 teachers, 57 per cent taught science only, while 43 per cent taught science and one or more subjects in other groups. Mathematics was the department most frequently combined with science. Science in the high schools under consideration consisted in large measure of general science, biology, physics, chemistry, agriculture, and physiology.

Little or no evidence was found that there is a department of foreign languages in our high schools; therefore, the discussion of foreign languages will consider the subjects of the group separately.

Of 1,190 teachers, 77, or 6 per cent, taught Latin predominantly. Of these 77 teachers, 34 per cent taught no other subject, while 66 per cent taught some other subject or subjects. The subjects most frequently combined with Latin were English and mathematics. There was little evidence that teachers of Latin taught any other foreign language, hence the statement that we do not have a department of foreign languages in our high schools. No doubt, the combination of Latin with English is the result of guidance in times past, but we might raise the question whether we should continue to advise this combination or whether we should advise that another foreign language should constitute the minor.

Of 1,190 teachers, only 15 taught French predominantly. None of these taught French alone. Nine of them taught French and English; one, French and Latin; three, French and Spanish; and one, French and social studies. One taught French and gave attention to extra-curriculum activities. While the number of teachers teaching French predominantly is too small to provide data for conclusions, here again little evidence is found to show that we have teachers of foreign languages.

Of 1,190 teachers, 106, or 9 per cent, taught commercial subjects predominantly. Of these 106 teachers, 81 per cent taught only in their own field of instruction. The combinations of the remaining 19

per cent of commercial teachers were so scattered as to give no data for guidance. This is a field of instruction in the high school that has grown rapidly in the last two decades. A large number of subjects are included. Students preparing to teach commercial subjects and college professors in charge of training such teachers should note that economics is classified as a social study in the high-school program of studies and not as a commercial subject. There is very little evidence to show that commercial teachers teach economics other than as a chance combination. This organization is often different on the college level, where economics is usually offered in the college of commerce. Commercial teachers teach commercial arithmetic to a greater extent than do mathematics teachers. Commercial teachers teach commercial law to a greater extent than do teachers of social studies. The preparation of teachers sufficiently proficient to teach the variety of subjects classified as "commercial" is a real challenge. However, bookkeeping, shorthand, and type-writing still constitute the fundamentals according to present-day practice.

Of 1,190 teachers, 120, or 10 per cent, taught home economics predominantly. Of these 120 teachers, 41 per cent taught no other subject. The subjects most frequently combined with home economics were science and social studies. One of the common difficulties in assigning duties to teachers of home economics is to find subjects outside of their own department that they are competent to teach.

Of 1,190 teachers, 76, or 6 per cent, taught manual arts predominantly. Of these 76 teachers, 32 per cent had programs which did not include subjects outside of their own field of instruction. The combinations with this field seem to be a matter of chance. Adequately preparing students to teach the variety of subjects classified in this field of instruction while providing a liberal education is one of our future problems.

Of 1,190 teachers, 56, or 5 per cent, taught music predominantly. Of these, 77 per cent taught music only. The remaining 23 per cent had subject combinations so scattered as to give no data that would guide in selecting the minor. The teachers of music reported the number of recitations a week and the number of pupils in a class with

so little exactness that one is led to suggest that they give more heed to class organization and good school bookkeeping if they wish to have their subject assume the importance that its social value dictates.

The analysis showed that art has made but little headway in the high-school program of studies. Few suggestions were found that offer guidance in the training of teachers.

Physical education was so inadequately organized in the high schools that the analysis of programs revealed only the need of strong leadership in this department and the need of determining the subject matter and the activities that should constitute the program. The leadership and the program must come in a large measure from those who are training teachers for this department of instruction.

SUBJECTS WITHIN DEPARTMENTS OF INSTRUCTION

Another type of information derived from the analysis of high-school teachers' programs will form the second part of this article. Two problems will be discussed, and data to answer them will be presented. The first problem concerns the combinations of subjects taught by science teachers; the second, the combinations of subjects taught by teachers of the social studies.

To what extent are the science subjects combined to make up teachers' programs? Do teachers of physics teach general science, biology, and chemistry more frequently than they teach subjects outside the science group? Is it true that a prospective teacher of physics should take his minor in mathematics, as he has long been advised, or should he make his teaching minor the other subjects of the science group—chemistry, biology, and general science? In other words, what data can be obtained from the programs of teachers who teach the science subjects that will serve as a guide in the training of those who are later to teach science in the high school?

Among the high-school teachers, there were 403 whose programs included one or more science subjects, combined, of course, with a variety of other subjects. Table I shows the number and the percentage of these 403 teachers who taught the various sciences. The figures give a rough indication of the relative amount of each of these sciences in high-school programs. The first six constitute the

great mass of the science in our high schools. It is no surprise that physics leads. Perhaps it is a matter of some surprise that so large a part of our teaching effort in science is expended on general science. If the figures were based on the number of pupils studying the various sciences, general science would lead, because the number of pupils in general-science classes usually exceeds the number of pupils in physics classes. Perhaps agriculture has a larger place in the high-school programs of Iowa than in those of many other states. Biology is rapidly becoming a subject widely taught in the high school. Chemistry is found to a smaller extent than might be expected, but it is seldom included in the program of studies in a small

TABLE I
NUMBER AND PERCENTAGE OF 403 SCIENCE TEACHERS
TEACHING THE VARIOUS SCIENCES

Subject	Number	Per Cent
Physics.....	162	40
General science.....	151	37
Agriculture.....	108	27
Physiology.....	56	14
Biology.....	55	14
Chemistry.....	29	7
Physical geography.....	12	3
Botany.....	8	2
Zoölogy.....	8	2
Geology.....	1	0.2

high school. Physical geography has been almost entirely displaced by general science. Botany as a separately organized subject has almost disappeared. Of course, its content comprises a large part of the subject matter of general science. What is true of botany is true of zoölogy and geology.

Now let us face the other aspect of the programs of teachers who give instruction in the science subjects. Do we have science teachers, that is, teachers who teach physics, general science, biology, and chemistry more consistently than they teach subjects outside the science group? To answer this question, let us consider first those teachers who teach physics. Do they teach other science subjects more often than they teach mathematics, social studies, or English?

Of 162 teachers of physics, 88 taught other science subjects,

while only 63 taught mathematics, 47 physical education, 45 manual arts, and 24 social studies. These figures are evidence of the trend in teachers' programs. Physics is being grouped with other sciences much more than with mathematics or any other subject. What does this mean for our guidance of prospective teachers whose major is physics? If they are to be guided by the specifications of the work for which they are preparing, they should have a minor in the other sciences and many of their free electives should be in the sciences also.

Of 151 teachers of general science, 87 taught other sciences, while 41 taught physical education, 39 home economics, 38 mathematics, and 36 social studies. Though there is much evidence here to show that general science is a subject assigned to teachers for reasons other than preparation, there is much evidence that it is being classed among the sciences and that teachers who teach general science teach other science subjects to a greater extent than they teach subjects outside the science group. One of the outstanding problems in teacher-training is to arrange a college major for prospective teachers of general science. Few colleges have faced this problem, perhaps because they have not been sensitive to the change that has come about in the past decade in our high-school programs, in which general science has become important, or because of the continued insistence of college science departments that students do most of their work in some one department, such as physics, chemistry, botany, zoölogy, or geology. Those interested in teacher-training adequate for the work of teaching general science must take the lead in organizing a course of instruction in the various sciences that gives the preparation needed for teaching this recent arrival.

What is true in the case of teachers of physics and general science is true in the case of teachers of the other subjects in the science group. Those teachers who teach biology, agriculture, and chemistry teach other science subjects much more frequently than they teach subjects outside the science group.

The evidence is sufficient to warrant those in charge of the training of teachers of science to insist on a program of instruction for the prospective teachers that meets the specifications of the job, and the specifications show that the science subjects have become a group

which appears in science teachers' programs much more often than does mathematics or any other subject outside the science group.

The second problem deals with combinations in the social studies. Does the teacher of history also teach civics, economics, and sociology? Does the teacher of civics teach history, economics, and sociology? Does the teacher of economics teach history, civics, and sociology? Does the teacher of sociology teach history, economics, and civics?

We may look at this problem from another angle. Does the teacher of history whose program is not filled teach English, foreign language, science, or mathematics as frequently as he teaches other subjects in the social-studies group? Does the teacher of civics teach English, foreign language, science, or mathematics as frequently as he teaches other subjects in the social-studies group?

The question we are now trying to answer is: Do those in charge of the employment of teachers and of the assignment of their teaching programs recognize the social studies as a group of subjects when they choose the teachers of their staff and allocate subjects to them to teach?

In order to answer this question, the program of every teacher who taught any one of the subjects classed as social studies was analyzed in detail. Among the 1,190 teachers, there were 288 who taught one or more of the social studies. In addition, the programs of 325 teachers of the social studies for the school year 1923-24 were studied. This made a total of 613 programs or 613 teachers in the group considered. Table II shows the number and the percentage of these 613 teachers who taught the various subjects in the social-studies group. This table gives a rough estimate of the extent to which each of the subjects constitutes the whole department, called "social studies." History has a comfortable lead. If we combine civics and American government, this field has a very significant place among the social studies. Of course, the Committee of Seven put its stamp of approval on civil government and thus contributed to its recognition as a social study along with history. Recommended in 1916 for the ninth grade by the committee of the National Education Association, community civics gained a more prominent place. Economics and sociology have also won strong recognition as members of the social-studies group. The course called "social problems"

has not gained very wide recognition, probably because of competition with the separately organized courses in economics, sociology, and American government.

Do the teachers of history teach other social studies more often than they teach English and other subjects outside the group of social studies?

Of 394 teachers of history, 200 taught other social studies, while only 75 taught English, 33 mathematics, 37 foreign language, and 24 science. These figures show conclusively that the tendency is for the teacher of history to teach other social studies much more often than he teaches subjects outside the social-studies group.

Of 175 teachers who taught economics, 116 taught other social

TABLE II
NUMBER AND PERCENTAGE OF 613 SOCIAL-STUDIES TEACHERS
TEACHING THE VARIOUS SUBJECTS OF THE
SOCIAL-STUDIES GROUP

Subject	Number	Per Cent
History.....	394	64
Civics.....	193	31
Economics.....	175	29
Sociology.....	96	16
American government.....	58	9
Social problems.....	33	5

studies, while only 27 taught English, 25 mathematics, 10 foreign language, and 27 science. These figures show that the tendency is for the teacher of economics to teach other social studies rather than subjects outside the group of social studies.

Of 96 teachers who taught sociology, 64 taught other social studies, while only 20 taught English, 14 mathematics, 6 foreign language, and 10 science. Sociology, too, has become a subject which is combined more frequently with other social studies than with subjects outside the group of social studies.

Of 193 teachers who taught civics, 130 taught other social studies, while only 42 taught English, 33 mathematics, 17 foreign language, and 11 science. That civics is considered one of the group of social studies is apparent.

Of 58 teachers of American government, 46 taught other social

studies, while only 10 taught English, 7 mathematics, 3 foreign language, and 6 science. The evidence is convincing that American government is considered one of the group of social studies.

Of 33 teachers of social problems, 24 taught other social studies, while only 6 taught English, 5 mathematics, 4 foreign language, and 5 science. Social problems, too, is one of the group of social studies.

This analysis shows conclusively that history, civics, economics, and sociology constitute a group of subjects that superintendents and principals are assigning to teachers to make up their programs. True, teachers of each of the social studies teach subjects outside the group of social studies, but the tendency to teach within the group is sufficiently marked to demand serious consideration and to enlist the support of teacher-training institutions.

While, so far as the writer knows, no such detailed analysis of teachers' programs in the social studies has been made elsewhere, there is reason to believe that conditions in general are much the same as in Iowa.

What is the significance of this new combination of subjects made by superintendents and principals and curriculum-makers? What does it mean to have this alliance among the four social studies in our high-school programs? What shall we do in the face of the facts?

The significance of this problem is forcefully brought to the attention of those who are striving to prepare students to teach in such positions as the high schools offer. We have shown that the high-school positions in the social studies demand teachers with preparation in each of the four fields: history, economics, political science, and sociology. Yet it is common to find a Senior expecting to teach—he knows not what—in the high school who has “majored” in economics but who has had no training in history, political science, or sociology. It is also common to find a Senior with a strong major in history but with little or no training in any of the other three fields who has definitely planned, for at least two years, to teach in the high school. It is just as common to find a Senior with a major in political science and no training in the other three fields.

When such students are asked what they expect to teach in the high school, they often answer, with that confidence that comes with the approach of earning one's first degree, “I intend to teach soci-

ology," or "I intend to teach political science," or "I intend to teach economics," or "I intend to teach history." Painful is the task of the one who must disillusion such a student by describing to him the type of positions open in the high school, as shown by the analysis of teachers' programs that has been described.

Superintendents are more and more being intrusted with the duty of selecting teachers. They are rapidly becoming trained for their duties. There is evidence that they have been trained to "draw up specifications" for the various jobs connected with running a school and then to go into the market to find the persons who can best meet the specifications. These superintendents have outlined the job of teaching the social studies in the high school, part of the specifications for which is training in history, political science, economics, and sociology.

These superintendents complain that training adequate for the job of teaching the social studies is hard to locate in any one individual. They are asking that those who are in charge of preparing teachers for the social studies set up a program of training that meets the specifications of the job which the teacher will find confronting him when he becomes a member of a high-school faculty as a teacher of the social studies.

We must outline a course of training in history, political science, economics, and sociology that meets the requirements for teaching social studies in the high school. We must see to it that the prospective teachers of social studies know the requirements of the position to which they aspire and that they prepare for it.

Are the facts that are true for Iowa true for other states? The writer knows of no similar detailed analysis of teachers' programs in other states and hence cannot answer the question. Of one fact he is certain: Most of the states like Iowa have a preponderance of small high schools, and the subjects taught are in a large measure the same. It is quite probable that a similar analysis of high-school teachers' programs in other states would disclose much the same combinations of subjects as we have found and would afford (1) guidance for those who are to plan the academic training courses for prospective teachers and (2) guidance for those students who are to enter training with the intention of preparing themselves for specific positions as they appear in high-school programs.

JUNIOR-COLLEGE AIMS AND CURRICULUMS

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That the aims of the junior college are those of the modern secondary school and that the curricular problems of the junior college are, after all, problems of secondary education are convictions which have gradually forced themselves upon the writer during the later years of a quarter of a century of intimate contact with the problems of the junior college and the upper high school.

In their efforts to develop satisfactory high-school curriculums, professionally trained secondary-school men have found themselves greatly handicapped by the fact that they were dealing with a truncated institution, which was compelled to surrender its students before its work with them could be completed. As a matter of fact, that work was seldom, if ever, completed, even in the case of students entering college, as a majority of the liberal-arts colleges, which these students entered, blindly refused to recognize any part of their work as lying in the field of secondary education. These institutions, instead of endeavoring to solve the problem of what students ought to be, to know, and to be able to do at the completion of their formal secondary education, have followed traditional initiatory college programs, which have included much foreign language, not so much mathematics, and very little of anything closely related to the life of the day. The result has been a terrific student mortality in the first two college years, for which college men not infrequently have attempted to hold the secondary schools responsible.

While secondary-school men have believed for a long time that there would be a great reduction in student mortality if the formal and lifeless work of the traditional college were replaced by subject matter dealing with vital aspects of life and taught by efficient teachers, they were powerless to do anything so long as the work of the first two years of college was administratively bound up in a "sacred four-year college course." With the isolation of the junior

college in universities and with its appearance as an institution by itself or in connection with the high school, the situation is changing, although, as might be expected, the junior college has tended to imitate the curriculums of the traditional college and may consequently be in danger of becoming a mere senior-college preparatory school, with curriculums so narrow and formal as to be almost valueless to the great majority of its students who leave the institution to enter not the senior college but the activities of life.

Contemporaneously with the multiplication of public junior colleges, however, there is gradually developing in college and university circles a clearer conception of the real functions of the junior college. University men are beginning to appreciate the fact that it is the function of the junior colleges to prepare for the activities of life as well as for the senior colleges and the undergraduate professional schools. Many institutions have become very much concerned about the large part of their incomes being consumed by the work of the freshman and sophomore years, in which the senior colleges and professional schools are interested only as they prepare students for real university work. The senior colleges and the undergraduate professional schools, interested primarily in the ability of students to do their work, seem almost ready to concede that the problem of developing that ability belongs to the expert in secondary education, to whom the curricular problems of the junior college may soon be referred.

The recognition of the fact that the junior college is the capstone of secondary education will enable experts in that field to construct scientifically curriculums for the entire secondary-school and junior-college period based on the assumption that it is the function of the junior college to supplement the work of the high school in such a way as to prepare its students for the activities of life as well as for the senior colleges and the undergraduate professional schools. An evident curricular consequence of such an assumption is that the curriculums of the junior college must include such courses as will provide the type of foundation training necessary for the development of the knowledge, ideals, interests, and methods of procedure essential to successful work in these institutions. University departments which rear superstructures of advanced and specialized

courses on these foundation courses should feel responsibility for designating clearly the outcomes of these introductory courses as well as their nature.

Exactly what ought the pre-medical student to get from the course in physics which is prescribed for admission to the medical schools? Clearly, the pre-medical student cannot be expected to emerge from a year course in physics as a physicist. Certainly, there must be some principles of physics more important than others from the point of view of usefulness in the work of the medical student. What are those principles? They must be either discovered by the research student of higher education or made clear by departments of the medical schools utilizing a knowledge of physical principles, if we hope to conserve the time and energy of a group of students whose pre-professional education and training are now consuming entirely too large a percentage of their total life-span.

Similarly, senior colleges can do much toward the standardization of courses preparatory for advanced work in the departments concerned. With an increasing percentage of students migrating from institution to institution between the sophomore and junior years, it becomes more and more important that these introductory foundation courses be standardized.

In the past, senior colleges and undergraduate professional schools have been much concerned about the foreign-language equipment of the students applying to them for admission but very careless about providing natural opportunities for these same students to make practical use of foreign languages in the work of the senior colleges or professional schools. If these institutions will organize their work so as to necessitate the use of the languages which they prescribe, there can be no quarrel with their demands. On the other hand, if they do not require their students to make use of the prescribed languages, the waste of time and human energy is almost criminal in many cases. Justice would seem to require that the languages be used in the advanced work or that the question of foreign-language study be left to the high school and the junior college to be settled by them on the basis of relative values.

Turning from the curricular consequences of the assumption that one function of the junior college is the effective preparation of

its students for the work of the senior colleges and the undergraduate professional schools, we may note a few of the implications of the other function of the junior college, the preparation of its students for the activities of life. This implies effective preparation for intelligent participation in, and enjoyment of, those activities. The junior-college graduate is expected to participate in and enjoy the life of his day on a higher intellectual level than that attained by the elementary-school graduate. He should know the "why's" as well as the "what's," which implies a knowledge of such principles as will enable him to be at home in the modern world. From a curricular point of view, this implication means either college or departmental orientation courses organized from a psychological standpoint rather than from the customary logical point of view.

Finally, it is the purpose of the American people to develop through their educational systems young men and women able and willing to participate in the activities of life as socially efficient citizens. Although aware of the implications of "social efficiency," secondary-school men have not had at their disposal the time necessary for the attainment of the objectives implied in the accomplishment of this civic purpose of their schools. With the junior college as the capstone of secondary education, however, the way will be open to their experts to include in the curriculums of the junior college such studies as are needed in order to achieve the civic as well as the social, cultural, and pre-professional aims of our public-school systems.

PROVISIONS FOR MEETING INDIVIDUAL DIFFERENCES AMONG PUPILS IN THE JUNIOR HIGH SCHOOL

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That individual differences among pupils in the junior high school are real and significant no school man today would question. How to provide for these differences is not a simple matter.

The writer has communicated with forty of the best-known junior high schools in the Middle West in order to find out the provisions being made for individual differences among the pupils in these schools. Replies were received from thirty-one of the forty schools. Some excerpts from the letters follow.

Roosevelt Junior High School, Fond du Lac, Wisconsin.—"Pupils entering Grade IX B from rural or parochial schools are segregated in mathematics, English, and citizenship classes."

Central Junior High School, Saginaw, Michigan.—"Pupils are classified by tests and by elementary-school ratings and placed in the academic, vocational, or commercial curriculum. . . . Boys and girls are segregated in most subjects. . . . Both the subjects and the content of the subjects are adapted to the sex, grade, and curriculum groups."

Junior High School, Menominee, Michigan.—"We classify all pupils according to mental ability as determined by teachers' judgments and marks. We also segregate boys and girls entirely."

It is perhaps pertinent to remark here that the junior high schools at Saginaw and Menominee are two of the very few junior high schools in which sex segregation is practiced. It will be worth while to watch the experiments thus being carried forward.

Whittier Junior High School, Lincoln, Nebraska.—"We have three groups—A, B, and C. The teacher of the C group does not try to cover as much work as do the teachers of the other groups, and the C work is much simpler. The B group covers the work of the aver-

age pupil, while the A group does more advanced work and much outside reading, especially in social science. We do not intend to give more of the same kind of work to the A group but to give a different kind of work."

West Side Junior High School, Little Rock, Arkansas.—"The provisions in courses of study for individual differences are neither definite nor the same for any two classes. While we have a so-called 'minimum essentials' list, we do not overemphasize minimum essentials for the reason that some teachers drill on these rather than teach boys and girls. However, it is expected that certain essentials will be covered by any and all classes and that additional work will be done by those who can do it."

Central Junior High School, Youngstown, Ohio.—"Our elective system allows more handwork for the slow and more language for the bright."

West Intermediate School, Jackson, Michigan.—"The amount of work required of the normal pupil is twenty-five points a semester. With the permission of his session-room teacher, he may, however, elect as many as thirty points. If a pupil is unable to carry twenty-five points a semester, the number of points is reduced to as low as twenty or, in extreme cases, even lower than that."

Junior High School, South Bend, Indiana.—"We find that by proper vocational and educational guidance the failures in language and mathematics have been reduced to a negligible percentage. We do not permit a pupil to take algebra or a language unless his I.Q. justifies it."

Capitol Hill School, Oklahoma City, Oklahoma.—"We have a special teacher for children who have failed or are behind their group or who are, for some reason, misfits. Under this special teacher the pupils study the academic subjects for half-time each day. The other half-day vocational or manual work is carried on at the junior high school."

West Junior High School, Lansing, Michigan.—"Credit is allowed for work in music and Bible study done under definite supervision outside of school. Occasionally, by special arrangement, credit is allowed for other subjects."

West Junior High School, Des Moines, Iowa.—"In connection with

each junior high school we have a small subjunior department, to which we transfer from the neighboring elementary schools those over-age and undergrade pupils who are behind because of lack of ability, ill health, or other unfortunate circumstances. These departments are taught by special teachers. By handling such pupils in the junior high school buildings, we are able to provide a better program of physical education, industrial work, etc., which increases their interest in staying in school and does better for them while they stay."

Roosevelt Junior High School, Decatur, Illinois.—"After several years of careful observation, it seems to me that the best provision for individual differences is to secure the best teacher available. Teach her how to make assignments, motivate work, and supervise study, and the thing is done."

Jordan Junior High School, Minneapolis, Minnesota.—"The individual differences of pupils can be provided for best by having all the teachers consider the child as an individual and not as one of a large group. In fact, the junior high school is more a mental attitude than an organization. Where you find teachers with a junior high school mental attitude you find teachers who are looking after individual pupils and caring for individual differences. Of course, the organization must be so flexible that adjustments can be made at any hour of the day. This securing of flexibility is the big work of the principal."

Byers Junior High School, Denver, Colorado.—"The school is organized on the basis of close classification. We have something like eight groups to each grade. In departmental meetings the teachers arrange their courses to fit these types of groups. No particular change in method is involved, the difference being in the simplicity of the material presented and in the emphasis. We do not give marks of A and B to pupils in the poor sections, because in the long run it does more harm than good to the individuals and to the group. We believe that there is less waste of effort and less disappointment if these children realize that their work is not up to standard and that they must choose the lines of study that they can follow best."

Julia E. Test Junior High School, Richmond, Indiana.—"In providing for individual differences, we make use of a building,

which we call our 'annex,' especially equipped for work with sub-normal children. Within the subnormal groups are smaller groups selected on the basis of ability. The normal pupils are placed in sections according to ability, each class being made up of three or four sections. Our curriculum provides for individual differences through election of courses. The pupils in the higher sections are expected to do more extensive and intensive work. Supervised study with periods fifty-five minutes in length prevails. No rigid standard of promotion is set; we promote by subject, keeping in mind the needs of the individual. In promoting from the junior high school to the senior high school, we do not hold the pupil to a rigid standard. A pupil may fail in IX A mathematics and yet be permitted to go into the senior high school. The two principals confer, and the pupil's case is disposed of in a manner which seems to be to his advantage."

Westport Junior High School, Kansas City, Missouri.—"Upon entrance to the school, the pupils are placed in groups on the basis of their intelligence rating and scholastic attainment. A wide range of electives is provided, and the teachers adjust the scope of the subject matter to the groups. Thus, we have a rapidly moving Latin group and a group which moves more slowly. Classes in mathematics are provided for in the same manner. In addition, separate groups are arranged for pupils who cannot make normal progress; these groups contain those pupils who are largely individual in their tendencies. Thus, a freshman English class composed of twenty pupils may include both pupils who can do only thirty weeks of work during the forty weeks and pupils who can make up work and return to their normal classes. The instruction here is individual. Again, we have classes in what we call 'Extra English.' The teacher has arranged her own course, using a card system. On the cards are assignments and exercises. The children take up these cards in order and as rapidly as they are able. The requirement for a new card is that the previous exercise be perfect in spelling, grammar, and penmanship. It has been found that this plan allows the child to proceed at his own rate, to receive individual correction in the case of his own weaknesses, and to derive satisfaction from his successes."

From these excerpts it is clear that the outstanding plan for

meeting individual differences is to segregate pupils into homogeneous groups. However, two of the thirty-one schools considered here are emphatically opposed to classifications of this sort. These schools are the West Junior High School, Lansing, Michigan, and the Ingalls Junior High School, Atchison, Kansas. Their criticisms are as follows:

West Junior High School, Lansing, Michigan.—"We do not use homogeneous grouping. We feel that it is an unnatural, unfair, uninspirational, undemocratic, and generally undesirable procedure, not well suited to school life or to life after school. In other words, we feel that the evils of homogeneous grouping in general far outweigh the advantages."

Ingalls Junior High School, Atchison, Kansas.—"The Atchison high school has tried homogeneous grouping for more than five years. The last two years we have encouraged frank expression of opinion from our teachers concerning the wisdom of ability grouping; a large majority oppose such grouping largely for sociological reasons. . . . Casual grouping is unquestionably more natural, more democratic, more open to modern methods of socialized classroom control. Nothing is more disheartening to pupils and teachers alike than subnormal groups. Pupils who are in superior groups unquestionably develop superiority complexes."

In addition to these more particularized ways of meeting individual differences, a few general plans may be cited. Thus, virtually every school administrator claims that his teachers seek to adapt subject matter and methods to individual needs, whether homogeneous classification is practiced or not. Again, promotion by subject is today a fully established procedure everywhere, such promotions taking place irregularly as occasion warrants. Likewise, over-age pupils are commonly transferred from the elementary school to the junior high school whether or not such pupils have satisfactorily completed the sixth grade. Not infrequently, of course, these pupils are placed in segregated opportunity rooms, and a program of work is made up for each pupil.

Furthermore, within these opportunity classes it is becoming more and more common for promotion to rest solely on the efforts put forth by the pupil. Indeed, there is much to be said in favor of

the general acceptance of the pedagogical slogan: "Every pupil who does his best passes." As H. B. Bruner says, "A child with an I.Q. of 80 who works up to 78 of that 80 is just as worthy of promotion as is the child who works up to only 115 of the 120 I.Q. with which he is blessed."¹

On the other hand, hopelessly deficient individuals, discovered through the opportunity class in the junior high school or otherwise, are commonly being transferred directly to a vocational or prevocational school, and trade instruction suited to their abilities is made the sum total of their work. Contrariwise, however, mature individuals who, because of social handicaps, have been unable to take their places in school with pupils of their own age, are, when ability is shown, given double or triple promotion and placed in classes which really challenge their efforts.

Vocational-guidance bureaus and courses dealing specifically with vocational information and occupations are commanding recognition in some schools. However, personal counseling by the principal, physical director, dean of girls, or other school officer is a very common practice in all schools. The sixty-minute class period with considerable attention to supervised study is likewise achieving much for individual pupils in some schools. Here, again, all depends on the teacher and her ability to assist neither too much nor too little but both wisely and well. Here and there some attempt to put in operation a modified Winnetka or Dalton plan is making its appearance, but little definite headway seems to have been made as a result of these experiments.

Finally, one other mode of providing for individual differences in a curricular way is worthy of more extended mention. This is the use of tryout courses by which to discover tastes and aptitudes and to guide pupils toward desirable goals of occupation. Courses of this type have various names: exploratory courses, broadening and finding courses, shop-round courses, overview courses, or merely tryout courses. The older manner of providing for this type of work was to devote perhaps one hour a week to a given subject for a semester,

¹ Herbert B. Bruner, *The Junior High School at Work*, p. 27. Teachers College Contributions to Education, No. 177. New York: Teachers College, Columbia University, 1925.

a year, or longer. Such time allotments, however, were objectionable from both an educational and an administrative standpoint. Schedules were difficult to make and carry out, and the continuity of learning and of interest in the course was defective. A much more acceptable scheme of conducting this kind of work is therefore being adopted. This consists in a concentrated attack on a given phase of the subject for five days a week for a period of five, six, seven, or more weeks. Attention is then devoted to another subject, which is dealt with in a similar manner.

The idea underlying this plan originated with teachers of shop subjects or practical-arts work and has been extensively employed in connection with manual training and home economics. However, the scheme appears to have possibilities for other subjects. Thus, art, music, drawing, general science, and other subjects to which but one or two hours a week have customarily been devoted may, perchance, be much more valuable for pupils if presented daily for a limited time only. Certainly, the scheme has the advantage of enabling pupils to gain an appreciative acquaintance with many types of experience. Thus, at Saginaw, Michigan, under the operation of the so-called "Shop-Round," boys in the junior high school are commonly made generally familiar with as many as twelve or fifteen different kinds of industrial work, while girls, during the same time, are made somewhat acquainted with from six to ten aspects of household arts.

At Okmulgee, Oklahoma, Superintendent H. B. Bruner and his staff of assistants worked out a plan for organizing and administering broadening and finding courses. In 1923-24 thirty-two broadening and finding courses were provided for Grades VII and VIII. The list included art, auto-mechanics, electricity, expression, music, journalism, drawing, science, cooking, sewing, typewriting, vocational information, woodworking, arts and crafts, banking, brick-laying and cement work, carpentry, home nursing, interior decorating, millinery, printing, public speaking, and introductions to various so-called "academic" subjects. Each course extended over a period of nine weeks, meeting five times a week, and each sought to give a typical cross section of the work to be offered in the later years

of the school. The procedure in electing these courses is described by Mr. Bruner as follows:

During the teachers-aid week, five days before the opening of school, personal invitations were sent by the teachers to the parents of every prospective seventh- and eighth-grade pupil. This invitation gave a short, simple explanation of the nature of the broadening and finding work and attempted to impress the parents with the importance of their attending, along with their children, the enrolment exercises. The city press and the school paper, of course, carried publicity featuring the new work.

The plan for enrolment was as follows: No pupil was allowed to enrol until he had visited the classroom or laboratory where each broadening and finding course was to be taught and had listened to a ten- or fifteen-minute explanation by the instructor in charge. The pupils along with their parents were sent on these visiting excursions in groups of thirty, each group following a set schedule that called for a visit to each room at a certain time. This work of visiting and becoming acquainted with what each broadening and finding course contained consumed the better part of a day for each of the two grades, but the results were most gratifying, for at least 90 per cent of the pupils enrolling and 30 per cent of their parents received first-hand information regarding the work and the school. After the get-acquainted pilgrimage, the pupil was allowed two or three days to discuss the matter with his parents and was then asked to send in his choice-card, which was signed by the parent, the teacher-adviser, and the pupil.¹

It is obvious from these excerpts and analyses that curricular provisions for individual differences are varied in the extreme. In summary, the schemes may be listed as follows:

1. Providing for the careful classification of pupils by means of tests or otherwise.
2. Providing for the removal of subnormal pupils from the junior high school building.
3. Providing much opportunity for educational and vocational guidance.
4. Providing simpler types of subject matter for the less able pupils.
5. Providing enriched courses for the more able pupils.
6. Providing for the acceleration of the more able pupils.
7. Providing opportunities for the more able pupils to carry extra credits, either inside or outside the school.

¹ Herbert B. Bruner, *op. cit.*, p. 23.

8. Providing for the shifting of pupils from curriculum to curriculum in accordance with their needs.

9. Providing for complete sex segregation.

10. Providing for the separate sectioning of pupils entering the eighth or ninth grade of the junior high school from rural schools or schools having the seventh and eighth grades organized as part of the elementary-school system.

11. Providing an abundance of handwork for certain slower types of pupils and a larger quota of academic work for certain types of non-motor-minded pupils.

12. Providing special teachers who devote much time to tutoring backward pupils.

13. Providing ungraded rooms for misfits.

14. Providing the best teachers available for the junior high school work in general.

15. Providing for promotion by subject and as circumstances justify.

16. Providing for a marking system which takes into account the plan of homogeneous grouping.

17. Providing a sixty-minute class period with real supervised study.

18. Providing for the partial promotion of pupils to the senior high school, permitting them to carry work in both schools if individual interests are best served that way.

19. Providing for some phase of the project method of teaching and permitting pupils to advance from unit to unit of work as fast as their efforts and achievements warrant.

20. Providing for an extensive series of broadening and finding courses conducted intensively for relatively short periods of time.

21. Providing for pupils and their parents to secure a sampling of all the broadening and finding courses offered before electing such courses.

22. Providing that any pupil who works up to his capacity shall pass the course, whatever his grade classification.

The provisions in the junior high school for meeting individual differences in physical and social interests and needs are apparently not as well worked out as are the provisions for meeting intellectual

differences. Here and there, however, there are exceptions to this statement. Individual physical examinations; personal conferences with the school physician, the school nurse, and the physical-training director; corrective gymnastic exercises; and exemption from participation in certain forms of the generally required health exercises constitute the only common provisions for meeting differences of a physical sort. In a few schools pupils with limited physical strength are permitted to attend sessions on a part-time basis only, and in a few schools certain girls of normal mental ability but of devitalized physical strength are permitted to attend an ungraded room, usually situated on the first floor of the building, and to have all instruction provided for them there.

Athletics of many kinds are finding general favor in junior high schools, but in only a few schools is more than incidental provision made for individual differences in tastes and abilities. The most conspicuous exception to this statement which has come to the writer's attention is that of the Skokie Junior High School, Winnetka, Illinois. A fairly complete account of the work appears in the *School Review* for September, 1925.¹ Suffice it to say here that much competitive activity is encouraged, teams of many sorts being organized for each season of the year. The pupils are assigned to teams in accordance with their tastes, their weights, and their playing abilities, and each one is made to feel that, however limited his abilities, he can contribute something to the general sportsmanship record of the school.

Provisions for meeting individual differences in a social way have, in part, been revealed in the present discussion. Certain additional provisions deserve brief mention.

First, the word "extra" as connected with certain forms of social and recreational activity is rapidly becoming obsolete in school usage. As applied to collateral agencies that functioned only after the regular school day was over, the word was appropriate. The decided trend of the times, however, is to incorporate these so-called "extra-curriculum" activities as an integral part of the regular school work. Consequently, there is today opportunity for full super-

¹ Harry P. Clarke and Willard W. Beatty, "Physical Training in the Junior High School," *School Review*, XXXIII (September, 1925), 532-40.

vision over them and for their organization in a manner to provide amply for individual differences of many kinds.

At the head of the list of these quasi-curricular organizations stand the leisure-hour clubs. No progressive junior high school is without such clubs, numbering from two or three to sixty, seventy, or one hundred. Clubs of every possible kind are included, ranging from art work to zither-playing. Every pupil is free to join the club or clubs of his choice; hence wonderful opportunities for the development of individual tastes and interests of a recreational sort are furnished.

Similarly, auditorium or assembly programs are prepared by groups of pupils weekly or oftener, and in these programs all pupils are given opportunity to participate in ways that are best suited to their tastes and needs. Musical organizations, literary societies, school-service squads, monitorial work, the school paper, class and school offices—these and other agencies of similar sorts offer a wide range of opportunities for pupils of all grades and all abilities to gain experiences in unique ways that call for initiative, leadership, co-operation, and obedience to authority. They are, indeed, intensely socializing in their effects.

In conclusion, it seems fair to claim for most progressive junior high schools what one principal claims for his school when he says: "The fact is that our school is completely saturated with the idea of individual differences in pupils, to the extent that our so-called 'required' courses and our regular school procedure are not insisted upon when we are dealing with an individual for whom some special treatment is apparently better."

In the final analysis, therefore, the effectiveness of the junior high school, as of all schools, resolves itself into the question of teachers and administrators possessed of an understanding of the principles and methods of the junior high school idea. Given these, provisions for individual differences will be devised.

THE TEST-STUDY METHOD VERSUS THE STUDY-TEST METHOD IN TEACHING SPELLING

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The old method of teaching spelling is known as the study-test method. The pupils are required to study a given list of words on which they are later tested, and they usually apportion their time about equally among the words in the list. The pupils spend almost as much time studying the words which they can spell correctly without study as they spend studying the words which they cannot spell correctly without study.

Recently another method, the test-study method, has received much attention. The pupils are given a preliminary test on a list of words before they study the words. The misspelled words are noted and corrected, and each pupil studies only the words that he misspelled. The pupils who spell correctly all the words in the preliminary test are excused from further study of spelling until the other pupils have learned the words which they respectively misspelled. All the pupils are then required to take a second test on the entire list of words. The misspelled words are again noted and corrected, and the process is continued until satisfactory results are obtained.

In order to ascertain the comparative effectiveness of the two methods of teaching spelling, a study was made of both the immediate and the delayed results obtained by the use of these methods.

Thirty-four high schools in eight states co-operated in giving immediate-recall tests to 1,000 ninth-grade pupils in October, 1925. Thirty of these thirty-four high schools again co-operated in giving delayed-recall tests to 777 of the same 1,000 pupils in March, 1926. In order that large schools might not unduly affect the results, not more than seventy-six pupils were included from any one school.

Two lists of words, A and B, each consisting of twenty-five words, were so selected that for every word in List A there is a word

in List B of the same frequency of use according to Horn's study, "The 10,000 Words Most Commonly Used in Writing," and of the same difficulty of spelling according to Ayres' Measuring Scale for Ability in Spelling. According to Ayres, eighth-grade pupils should average 66 per cent on the most difficult words in the lists and 88 per cent on the least difficult words in the lists. It is thus apparent that the distribution is highly skewed, but this is a situation commonly found in schoolroom practice.

In spite of the care exercised in selecting the two lists of words, it was thought best to take the added precaution of changing the lists of words used for each method. In other words, List A was used for the study-test method and List B for the test-study method with 500 pupils in Schools 1 to 18, while List B was used for the study-test method and List A for the test-study method with 500 pupils in Schools 19 to 34. It was thought that, if one method proved superior regardless of the list of words used or the group of schools concerned, this would be a strong argument for that method of teaching spelling.

In the case of the study-test method, each pupil was given a printed list of words. As the pupils watched the printed lists, the teacher used five minutes in pronouncing the words. The pupils were then given twenty minutes in which to study the words. It should be noted that at no time during the entire experiment were any specific directions given relative to the precise method by which the pupil was to learn a word. After the pupils had studied for twenty minutes, the printed lists were collected. The teacher then used ten minutes in pronouncing the words, and the pupils spelled the words on blanks provided for the purpose. The papers were then taken up. A total of exactly thirty-five minutes was used in securing the papers by this method.

A few days later the same pupils were given ten minutes in which to spell on blanks provided for the purpose the other list of twenty-five words, on which the pupils had made no preparation. The papers were then exchanged, and the teacher handed to each pupil a printed list of the words. Each pupil was instructed to underline on the paper every word misspelled and then to underline the same words on the printed list. The papers were then taken up, but each

pupil was given the printed list showing the words that he had misspelled. The pupils were instructed to study for ten minutes only the words underlined on their respective printed lists. The pupils who spelled correctly all the words in the preliminary test were not handed printed lists and were not to study spelling during the next ten minutes. After ten minutes, *all* the pupils were again tested on the entire list of words. The teacher used ten minutes to pronounce the list of words, and the pupils wrote the words on blanks provided by the author. A total of exactly thirty-five minutes was used in securing the papers by this method.

Five months later, 777 of the same 1,000 pupils in thirty of the thirty-four high schools participated in delayed-recall tests on the same lists of words. Without any further preparation and quite without warning, the pupils were asked to spell the two lists of words on blanks provided for the purpose, the teacher pronouncing the words.

A brief summary of the findings is as follows:

IMMEDIATE RECALL

1. There was considerable evidence that the pupils often misunderstood the word pronounced, especially in Test-Study 1. For example, "near" occurred when "mere" was pronounced. In order to make no exceptions, all such cases were counted wrong.

2. On the first 1,000 papers examined by the writer there were 155 cases in which the pupil failed to underline a misspelled word in Test-Study 1. Since this would prove a distinct handicap later, every paper thus carelessly marked was discarded, and another paper was substituted.

3. The test-study method was superior to the study-test method in both groups of schools. In Schools 1-18, the chances are 226 to 1 that the test-study method is superior to the study-test method. In Schools 19-34 the chances are 80 to 1 that the test-study method is superior. Hence, regardless of the group of schools or the list of words used, the test-study method was superior to the study-test method for immediate recall.

4. The test-study method was significantly superior to the study-test method for the better spellers, and it was at least as good as the study-test method for the poorest spellers.

5. Test-Study 2 showed decided improvement over Test-Study 1. There were only one-fifth as many cases of misspelling in Test-Study 2 as there were in Test-Study 1. In other words, after ten minutes of study, there were only one-fifth as many cases of misspelling as in the preliminary test.

6. There were 922 cases of misspelling in Test-Study 2. In 70 per cent of these cases the pupil misspelled in Test-Study 2 the same word he had misspelled in Test-Study 1. In only approximately 30 per cent of the 922 cases did the pupil repeat in Test-Study 2 exactly the same misspelling he had made in Test-Study 1. In approximately 40 per cent of the 922 cases the pupil misspelled in Test-Study 2 the same word he had misspelled in Test-Study 1 but made a misspelling different from that made in Test-Study 1. In 30 per cent of the 922 cases the pupil misspelled in Test-Study 2 a word he had spelled correctly in Test-Study 1.

7. There were only approximately 83 per cent as many cases of misspelling in Test-Study 2 as there were in the study-test method.

8. In Test-Study 1, 15 per cent of the pupils misspelled no words; 28.5 per cent misspelled not more than one word; 39.7 per cent misspelled not more than two words; 50.5 per cent misspelled not more than three words; and 92.8 per cent misspelled not more than one-half of the words in the list.

DELAYED RECALL

1. There was no significant difference between the study-test method and the test-study method for delayed recall when five months had elapsed without any drill. In ten schools the study-test method was superior, and in twenty schools the test-study method was superior, but in many cases the superiority was negligible.

2. There was no significant difference between the two methods for either the best or the poorest spellers.

3. The number of misspellings in delayed recall was only 68 per cent of the number of misspellings in the preliminary test in the test-study method.

4. Errors made in Test-Study 1 did not persist to any greater extent in delayed recall than did the errors made in the study-test method.

CONCLUSIONS

The foregoing data point to the following conclusions.

1. The test-study method is significantly superior to the study-test method for immediate recall for the good spellers; it is at least equal to the study-test method for the poor spellers.

2. There is no significant difference between the two methods for delayed recall when no drill has been given for five months; this holds true for both the good and the poor spellers.

3. The test-study method saves much time.

4. Errors made in the test-study method do not tend to persist to any greater extent than do errors made in the study-test method.

5. It is worth while to study spelling.

6. There is evidence that guessing operated in the test-study method. If a pupil is not certain that he has spelled a word correctly in Test-Study 1, he should indicate that fact and should study the word later.

7. The teacher should use the words in sentences if there is a possibility of confusing them with other words that sound like them.

8. If the pupils mark the papers after Test-Study 1, they should be carefully supervised, and they should understand the injustice of a failure to mark misspelled words.

9. Since the test-study method is at least equal to the study-test method for delayed recall, the test-study method should be adopted because it saves much time.

10. In view of the marked superiority of the test-study method for immediate recall, it would be interesting to know the delayed-recall results if scientific drill were used with both methods. This question awaits further investigation.

DIRECTED STUDY

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This article is not an appraisalment of directed study. For the time being we are interested neither in proving or disproving its worth nor in considering the philosophy underlying it. Assuming that directed or supervised study is a desirable procedure in a four-year high school, we hope to show how the program may be effectively inaugurated or, at least, to point out in some detail the steps by which it was put into successful operation in the high school at Danville, Indiana. In a number of places in educational literature slight treatment has been given to the problem of establishing this method, but in too few places have there been detailed accounts of actual instances of establishing it. It is with the thought of giving assistance in the application of a good theory that this experience is being described.

The idea of supervised study was not new in this school. For a number of years it had existed in name, but the actual procedure in most classes had not been that of truly directed study. In some cases it had degenerated into a lengthened recitation period with little or no time left for study in the classroom under the direction of the teacher and with insufficient time for unsupervised study outside the classroom. The class periods had been too short (fifty minutes). In other cases it had degenerated into what might be called a "study-lesson" system. In such classes the pupils "studied" together, the teacher leading the way. She talked much, asked many questions, and in other ways bothered the pupils while they were trying to study and should have been unmolested. She tried to get the whole class to think as one mind, but, in reality, just she herself was thinking aloud, and the pupils were supposedly following her as she led herself to believe that all were studying. Such pro-

cedure stupefied the pupils and made them intellectual dependents.

Working on the theory that supervised study is the supervision of individual pupils who are studying silently at their desks, the superintendent and the principal decided to put supervised study into successful operation. Both men had come to the school system at the same time and thus had inherited together the vestige of what at one time may have been a system of supervised study. For some time they had looked on the condition with reticence, but, when the propitious time arrived, they agreed to undertake a cure. The various steps in the reform are here presented.

Naturally, the first thing was to plan the procedure. The principal and the superintendent outlined roughly and agreed on the various steps necessary to establish directed study. The more minute details were not discussed at the outset but were taken up from time to time in the course of the semester in which the more intensive work of reorganization was done. Also, both read somewhat exhaustively the literature on the subject.

As they recognized that more than an ordinary amount of supervision would be necessary, they prepared for it. By providing additional clerical help and employing an additional teacher, they were able to free themselves almost entirely from clerical and teaching duties.

The last administrative change that had to be made pertained to the daily time schedule. Heretofore the school had operated on the basis of seven regular periods of fifty minutes each and an opportunity period of thirty minutes. The new time schedule provides for five regular periods of sixty minutes each, an opportunity period of forty minutes, and two assembly periods (at the opening of school in the morning and afternoon) of fifteen minutes each. Under the old plan, a pupil carrying a normal load of work had 150 minutes of school time daily for unsupervised study and an opportunity period of thirty minutes, making a total of 180 minutes. Under the new plan, a pupil carrying a normal load of work has 120 minutes of school time daily for supervised study, 90 minutes daily for unsupervised study, and an opportunity period of 40 minutes. Under the present plan, therefore, the pupils have 250 minutes of school time daily for study, whereas under the old system they had only 180

minutes. The gain in study time is secured by decreasing the time for recitation. Although the teachers are free to divide the sixty-minute periods between recitation, assignment, and study as they please, careful supervision insures an average of thirty minutes for directed study.

Incidentally, it may be added that the lengthened class period makes schedule-making much simpler because double periods for laboratory subjects are discontinued. Also, instructional costs in all laboratory and manual subjects are reduced, for teachers of such subjects can handle as many classes daily as can teachers of the academic subjects.

With the plans clear in their own minds, the next general step for the administrators to take in the establishment of directed study was to bring the entire faculty to their level of understanding and appreciation. As this could not be done immediately, they aimed to give the teachers a preliminary period of training sufficient to get them started right. General teachers' meetings were held in order to accomplish this end.

Three meetings were sufficient for this first objective. At these meetings the system of directed study and the plan for establishing it were outlined in some detail. General questions were asked and answered, and informal discussions were held. By means of comparisons and contrasts, the relation of directed study to other modes of meeting the problem of individual differences was shown. Especially was directed study compared with individualized instruction as exemplified in the Winnetka and the Dalton plans.

In order to assist the teachers in their further study of the subject of directed study, all the latest books available on the subject were placed in the high-school library, and a bibliography was given to each teacher.

A program of directed study should include material designed for the specific purpose of assisting pupils in the acquisition of knowledge of how to study. The introduction and use of such material constituted the next step in the plan.

A thirteen-page booklet, entitled, *Helps in How to Study*, was prepared by the superintendent. Copies of this booklet were furnished free of charge to the teachers and high-school pupils. It was pre-

pared in outline form and was fairly complete in its treatment of the subject. It may be that it was both too comprehensive and too condensed. In order to make certain that it would be understood in its entirety, it was made the subject of study in a series of four teachers' meetings before it was put into the hands of the pupils.

At the first of these meetings, the superintendent presided, since it was he who prepared the book. The program of this meeting consisted largely of a general explanation of the contents of the booklet and of instructions in how to use it. At the three remaining meetings different teachers presided, and each in turn proceeded as if she were the teacher of a high-school class and the other teachers were the pupils. This was done for the purpose of demonstrating how the booklet should be used in the classroom with the pupils. The superintendent attended all these meetings for the purpose of giving any assistance that might be necessary. The meetings were held in rapid succession, all within two weeks.

The principal prepared a schedule of classes in which the booklet was to be taken up for detailed study in lieu of the regular subject matter in these classes. The classes selected were such that every pupil in the high school was included. Then for about a week the substance of the booklet became the sole subject of study. In that time it was hoped that each high-school pupil would get a knowledge of how to study. The skill would have to come later. After a period of intensive study, the booklet was used as a reference by all the teachers as often as they deemed it necessary.

In a way, all the steps thus far described were preliminary. They were taken in an effort to get ready to launch a program of directed study. The first real work was in the mathematics department. The principal and the superintendent concentrated their efforts in the one department until it seemed to be functioning as desired. Then the teachers of the other departments were shown the work in mathematics as a model and were assisted in copying it. Until directed study in mathematics was established, practically no attention was given to the other subjects, for it was assumed that they could be no worse in the meantime than they had been before, when supervised study had existed in name only.

Mathematics was chosen for purposes of the demonstration for

three reasons: both the principal and the superintendent were mathematics teachers and consequently knew more about teaching it than about teaching any other subject; more first-class literature on the detailed technique of directed study was available in mathematics than in the other fields;¹ mathematics is objective by nature, and pupil achievement is more readily and more tangibly evident in it than in most other subjects.

After all the teachers had been given preliminary instructions, as described in the preceding parts of this account, the supervisors made a tour of inspection of the classes in mathematics for the purpose of seeing what was being done. The supervisors then knew how to proceed within the department.

The first real constructive measure was the actual demonstration teaching of a class in advanced algebra by the superintendent. The three teachers of the mathematics department witnessed the demonstration lesson. The purpose of this was twofold: to help the mathematics teachers to gain a common conception of what directed study is and how it is conducted; to provide an example of directed study in mathematics which could be used as a basis for discussion. Immediately after the pupils of the class had left the room, the three teachers and the superintendent entered into a conference of an hour and a half. In this conference the purposes of the demonstration lesson were realized.

With the demonstration lesson fresh in the minds of all, intensive work with each mathematics teacher was begun. When this had gone far enough to convince the principal and the superintendent that directed study was well established in the one department, conditions were ripe for using the entire mathematics department as a demonstration field for the teachers of the other subjects in the high school.

For about a week, the teachers of subjects other than mathematics visited the mathematics classes. When possible, the principal or the superintendent accompanied the teachers on their visits and held conferences with them afterward. In reality, this constituted directed observation. At the end of the week of observation, a general teachers' meeting was held.

¹ Perhaps the best is E. R. Breslich, "Supervised Study in Mathematics," *School Review*, XXXI (December, 1923), 733-47.

The principal opened the meeting by describing what had been done and what was being done in the mathematics department. The teachers of mathematics presented lists of advantages that directed study has over undirected study. (These and other advantages were later mimeographed, a copy being given to each teacher.) Then other teachers reported what they had seen in their observation of directed study in mathematics and discussed what they hoped to be able to do in their own classes as a result of what they had observed.

It has been stated that mathematics is objective by nature and that pupil achievement is more readily and more tangibly evident in mathematics than in most other subjects. When a mathematics teacher is supervising the work of individual pupils who are studying silently at their desks, she has something objective and tangible to look at. The problems on the pupils' papers are evidence of whether they are working. They are evidence also of whether the pupils are proceeding accurately and correctly. In supervising the study of pupils in mathematics, the teacher can look at the papers on which the pupils are working and thus get her cue for directing their efforts. In some subjects—for example, literature and history—the task of supervision is not so easy. There is no tangible evidence of study which a teacher can use as a medium between her own mind and the minds of her pupils. A pupil may be going through all the motions of study and, from external appearances, may be studying diligently, but, when there is no objective or tangible evidence of study, a teacher cannot know whether a pupil is thinking of his lesson or of a week-end fishing trip; even if she could, there is no way for her to diagnose the pupil's difficulties. Therefore, the supervisors had to show the teachers of the other subjects how they could apply to their respective fields the principles observed in the mathematics classes. The teachers had to be taught how to objectify their work even as mathematics is objectified.

Another series of teachers' meetings was held. In these meetings four things were considered: objectified assignment sheets, other objectified materials, means of directing study by other than objectified materials, and the relation of assignments to directed study.

The objectified assignment sheet has become the principal device for objectifying study material. All of the first meeting was devoted to a study of this device. The superintendent came to the

meeting with three sets of assignment sheets (a set for a class in literature, a set for a class in history, and a set for a class in civics). Each teacher was given a copy of each sheet. The sheets consisted in series of questions of the short-answer type¹ which could be answered only by carefully studying the assignment in the particular subject. When it was explained to the teachers how these sheets were to be prepared and used, they received the idea enthusiastically and requested that adequate facilities be placed in the school for printing the sheets. The facilities were provided, and the progress that the teachers have made in the preparation and use of printed assignment sheets has been more than gratifying.

The second meeting was devoted to a study of objectified materials other than assignment sheets and of means of directing study by other than objectified materials. About a score of such things were considered, and later these were placed in printed form in the hands of each teacher.

As assignments play an important part in the supervision of study, two meetings were devoted to the relation of assignments to directed study. Some of the principal items included in the discussions are as follows: the assignment and unsupervised study, the assignment and supervised study, assignment sheets, stimulants and aids in study, and differentiated assignments.

Thus far there have been mentioned twelve teachers' meetings in which work of an instructional nature was given to the teachers in an effort to establish directed study. A thirteenth meeting was held for the purpose of a general review of the first twelve meetings. The meetings were held in somewhat rapid succession, as many as five being held within two weeks, and all but two were during the first semester. It might seem that the teachers' meeting was the principal device employed in establishing directed study, but such was not the case. The teachers' meeting was simply the principal device used in giving the teachers information about directed study. The chief device in the actual establishment of directed study was supervision.

Supervision for the purposes of general improvement in instruction and of specific improvement in directed study was carried on

¹ See Donald G. Paterson, *Preparation and Use of New-Type Examinations*, chap. iv. Yonkers-on-Hudson, New York: World Book Co., 1925.

by the principal and the superintendent throughout the year. Since supervision for the specific purpose of improving directed study would be more effective after the teachers had been thoroughly instructed in their teachers' meetings in the theory and practice of directed study, a consideration of supervision has been postponed until the last.

Much might be included under the term "supervision." The major activities here included under this term are as follows: classroom visitation, preceded and followed by frank discussions of procedure and technique;¹ demonstration teaching; intervisitation by teachers; supervision of preparation and use of assignment sheets;² supervision of the professional reading done by the teachers; special attention to division of time between recitation, assignment, and directed study; special attention to the enrichment of the opportunity period; supervision by means of standardized tests. Frequent use was made of the device of issuing to teachers bulletins and other information in printed form. Among such were these: sample assignment sheets, outlines of lectures given by the superintendent in teachers' meetings, a list of sixteen advantages of directed study over undirected study as reported by different teachers, a list of means for objectifying materials for use in directed study, a list of means for conducting directed study other than objectified materials, stimulants and aids in study, copies of studies and researches not to be found in the school library, stenographic reports of model lessons exemplifying procedure and technique of directed study, and bibliographies. This printed material was useful for two groups of people: those teaching in the school at the time the material was produced and those who entered later. When new teachers entered the school, the administration found it easy to introduce them to the system of directed study by putting into their hands the same printed material used by the older teachers. This material, supplemented by a few personal conferences, served to familiarize a new teacher with the system so that profitable supervision could be started.

¹ The principal and the superintendent divided this work between themselves on the basis of subjects.

² Copies of all these were sent to the principal and the superintendent, who examined and filed them.

SUMMARY

The following outline shows briefly the various steps taken in establishing directed study in the high school at Danville, Indiana.

1. Administrative preparation
 - a) Principal and superintendent lay general plans
 - b) Principal and superintendent study literature on subject
 - c) Principal and superintendent free themselves of teaching and office duties so far as possible
 - d) Daily time schedule reorganized
2. Preliminary preparation of instructional staff
 - a) Three teachers' meetings
 - b) Bibliography and purchase of books on subject
3. *Helps in How to Study*
 - a) Booklet prepared
 - b) Booklet presented to teachers and carefully studied in a series of four teachers' meetings
 - c) Booklet presented to pupils and made basis of intensive study for about a week; later used constantly as a reference
4. Demonstration in mathematics
 - a) Preliminary tour of inspection of mathematics-teaching
 - b) Demonstration lesson for mathematics teachers and subsequent conference on it
 - c) Intensive supervision in mathematics
 - d) Teachers of other subjects visit mathematics classes
 - e) Follow-up teachers' meeting
5. Materials and means for directing study (considered in four teachers' meetings)
 - a) Objectified materials
 - (1) Assignment sheets
 - (2) Objectified materials other than assignment sheets
 - b) Means other than objectified materials
 - c) Relation of assignments to directed study
6. Supervision

SOCIOLOGY IN WASHINGTON HIGH SCHOOLS

READ BAIN
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This report is the result of an attempt to discover how many secondary schools in Washington are teaching sociology, to determine the preparation of the sociology teachers, to forecast the development of the subject in the high-school curriculum, to find out the benefits the pupil derives, and to discuss the interests and obligations of the University of Washington in the development of this phase of the newer education.

The materials on which this discussion is based were obtained by means of questionnaires sent to the 266 accredited high schools in the state. Twenty-five reports were received from high schools giving sociology in the autumn of 1924.

Of the 266 administrative officers, 128, or more than 48 per cent, submitted opinions. In so far as this is an unselected group, it ought to provide a fair sample of the opinions of school men regarding the status and the future of sociology in the high school. In so far as it is a selected group, it probably provides a fair sample of the favorable and unfavorable attitudes and hence ought to indicate the future of sociology in the secondary school. Thus, the opinions may serve as at least one datum in the determination of the policy of the University of Washington in the training of teachers who will be called upon to teach sociology. Similar studies should be made in the various states.

Values to the pupils.—Table I shows the distribution of the replies to the question regarding the values derived by the pupils from the course in sociology. Eleven stated definitely that they "don't know," and twenty-eight who answered the other questions did not reply to this question. Of those who "don't know," one thought that sociology would be an elective in ten years; two, "not soon"; two thought that it would be "soon"; one was "doubtful of the value of such a course"; while five thought that it should be required. Of

the twenty-eight who did not answer, fourteen thought that it should be required, and nine thought that it should be elective. Of the twenty-five teachers giving courses in sociology in the autumn of 1924, nineteen thought, or were certain, that "the interest in sociology would carry over into life or college." One said, "probably"; two, "don't know"; and three did not answer. The consensus of opinion was that the pupils are more interested in sociology than in their other studies. The greater increase from 1920 to 1924 in the enrolment in sociology courses than in the number of schools giving sociology would seem to confirm this opinion. In the opinions of these teachers, the marks earned were "about the same" or "slightly better."

TABLE I
VALUES DERIVED BY PUPILS FROM A STUDY OF SOCIOLOGY

	Frequency
Socializes (group relations, social structure, social sympathy).....	38
Better citizens.....	29
Interest and intelligence in social problems...	25
Broadens vision.....	16
Ethical (rights, duties, responsibilities).....	14
Balance and adjustment to life.....	9
Aids in selection of proper mates.....	1
Increases efficiency in business.....	1

It is doubtful whether the emphasis now placed on "social problems" in the high school is wise. Of the eight texts mentioned by the twenty-five schools replying, the four most used are based on the "social-problem" approach, that phrase being in the titles. Five schools use *American Social Problems* by Burch and Patterson; four, *Problems of American Democracy* by Hughes; four, *Social Problems* by Towne; three, *Sociology and Modern Social Problems* by Ellwood; *Community Life and Civic Problems* by Hill, *Elementary Community Civics* by Hughes, *Elements of Social Science* by Fairchild, and *Elementary Sociology* by Finney are used by one school each.

Emphasis should be placed on the normal relations of social life, not on the problems of abnormality. Pupils should be taught to approach social phenomena in the scientific spirit, not in the reformatarian spirit. The abnormal phases of social life are questions for the

expert. Study of them is of doubtful value to the immature student. When his attention is centered on "problems," he will very likely get a distorted view of society, which may remain with him all his life. The elementary course at the University of Washington puts the emphasis on normal social life. It is far more important that this should also be done in the high school.

The high-school pupil should be given a point of view regarding social life, not a series of more or less sentimental conclusions couched in terms of finality by the teacher, who is often ill trained. He should be taught the facts of societal phenomena, the methods of defining and investigating them, and, most important of all, the fact that social phenomena can be understood and controlled only by the same methods and points of view that have given us our understanding and control of physical phenomena.

This approach will do more to "broaden the pupils' vision" and make them "better citizens" than will emphasis on social problems. Consideration of social problems, however, should not be entirely ignored. A wise, well-trained teacher may have his pupils investigate local social problems with no ill effects. However, he will be very careful to keep such study clearly subordinated to the scientific view of social phenomena previously mentioned. He will present the "problem material" as a phase of normal life and studiously avoid all ethical and sentimental judgments.

The school men point out that in the case of a very large percentage of their pupils this is the last opportunity to get information and evaluations on pressing social problems. This is true to some extent, but it evidences the common fallacy that "education" is a process of cramming facts and solutions into the pupil's head rather than a process of giving the pupil a method and a point of view, intellectual interest and equipment, which will serve him when he is no longer "being educated."

The method of teaching sociology suggested is not as spectacular and "interesting" as is the "social-problem" method. It requires teachers who have the divine "gift" of arousing and organizing intellectual interest. It is more difficult but sounder pedagogy. It would do much to eliminate the present confusion of sociology with "socialism," "Bolshevism," "reform," "uplift," "social work," "altruism,"

"radicalism," and the rest. Eventually, it would teach the people that sociology investigates social phenomena by strict scientific methods in the severe scientific spirit—in short, that sociology is a *social science* but also a *natural science*. Sociology will never become a very "useful" science until people get over the habit of making an invidious distinction between *social* and *natural* phenomena and between *natural* and *social* sciences. The inculcation of this point of view is one of the greatest services the schools can render to humanity and is, in the opinion of the writer, the chief value to be derived from the study of sociology in the high school.

Present and future importance of sociology in the high-school curriculum.—It is difficult accurately to state the number of Washington high schools now offering courses in sociology. The figures shown in Table II are taken from the work sheets of the statistician in the

TABLE II
DATA REGARDING COURSES IN SOCIOLOGY FROM 1920 TO 1924, INCLUSIVE

	1920	1921	1922	1923	1924
Number of schools offering sociology.....	31	40	35	59	59
Number of pupils enrolled in sociology courses...	789	1,171	1,394	1,771	2,045

office of the State Department of Education. In the five-year period from 1920 to 1924 the number of schools offering sociology increased more than 90 per cent, while the number of pupils taking sociology increased almost 160 per cent. For comparative purposes, corresponding figures were obtained for economics. In 1920 forty-five schools served 1,023 pupils; in 1924, seventy-six schools served 2,045 pupils. There was thus a gain of almost 69 per cent in schools and a gain of almost 100 per cent in pupils enrolled.

From this it appears that sociology is growing much faster than is economics, which is to be expected, since the former is a more recent addition to the curriculum. Since both are elective, the fact that the increase in the number of pupils taking sociology is much greater than the increase in enrolment in economics indicates that the content of the former makes a greater appeal to high-school pupils than does the content of the latter. The average number of pupils enrolled in sociology in each school in 1920 was 25.0; in

economics, only 22.7. In 1924 the figures had risen to 34.6 for sociology and 27.0 for economics.

In view of these facts, if the interest in sociology continues to increase in the next five years as it has in the past, there will be more than one hundred schools teaching sociology to more than 5,300 pupils each year. If economics increases at the same rate, about 130 schools will be teaching economics to about 4,100 pupils. It is unlikely that either subject will continue to develop at this rate, but sociology will probably approximate it more nearly than will economics, since sociology has not so nearly approached its "saturation point."

An attempt was made to estimate the probable development of sociology in the high schools in the near future. The administrators who now have sociology in their curriculums were asked how generally they thought sociology would be taught throughout the state within the next ten years. Thirty replied as follows: "required," six; "growing," four; "considerable," "50 to 75 per cent," "very great," "none or not much," and "elective in all schools," three each; "don't know," two; "much more general," "100 per cent," and "25 per cent," one each. The consensus clearly indicates a belief on the part of these men that sociology will soon occupy a very much more prominent place in the curriculum than it does at present. However, these answers do not indicate much, since they are few in number and are made by men who have the pioneering educational spirit.

This question was asked of all the administrators: "Should at least one course in sociology be required for high-school graduation?" Of the 112 replying, 80 said, "Yes"; with one or two exceptions, the remainder said that sociology should be an elective.

If these men are representative and have any influence in forming educational policy, which, as administrative officers, they must have, we may expect the teaching of sociology in the high school to increase very greatly in the near future. All were asked, "What reasons prevent your offering sociology now? Financial? Curricular? Properly trained teachers? Public opinion? Other reasons?" Of the 104 replies, 38 said, "curricular"; 34, "financial"; 13, "properly trained teachers"; 12, "public opinion"; 3 definitely opposed it;

4, scattering. Doubtless, many of the curricular difficulties are chiefly financial, as is also the difficulty of getting properly trained teachers.

If the University of Washington is interested in extending the teaching of sociology in the high school, attention should be given to the following complaint. This difficulty must be present in the determination of the curricular policies of many high schools in the state.

Our course in sociology has recently received a serious setback in view of the fact that the University of Washington refuses to allow us group credit for sociology in the history group.

Our students have been offering two years of history, one-half year of economics, and one-half year of sociology in the history group.

It will be impractical for small high schools to organize a social-science major, but, if the social sciences can be combined in the history group, it will be not only a popular subject but one of the most valuable to the mass of high-school pupils.²

Qualifications of teachers.—The administrators were asked to state the desirable qualifications for sociology teachers. The majority of the qualifications reported are summarized in Table III. The remaining qualifications mentioned are distributed under such vague headings as "practical viewpoint," "scholarship," and "thorough grounding." Two people regard "business experience" as desirable; one prescribed a "charmed life"; and one man, far ahead of his age and generation, mentioned the Master's degree.

Preparation of teachers.—The following facts relate to the twenty-five teachers actually teaching sociology in the autumn of 1924. Of those reporting their sex, fifteen were men and six were women. Of eighteen reporting their ages, eleven were thirty-three or older; three were of "legal age." Four held the B.S. degree; one, the M.S. degree; eleven, the A.B. degree; three, the A.M. degree; one, the L.L.B. degree. None of them had "majored" in sociology; one had selected sociology as a minor; thirteen had "taken sociology courses"; one

² Since this was written, the University of Washington has allowed entrance credit for sociology as part satisfaction of the three units required from the history group. The letter is quoted, however, since it probably describes the situation existing in most states at the present time. The Department of Sociology in the University of Washington is attempting to assist the high schools in developing a standardized and adequate course in sociology.

had done practical social work; ten had never had a sociology course. "Taken sociology courses" probably means less than fifteen quarter-hours in most cases.

Supply of teachers.—The administrators were asked, "Do you, or would you, have trouble in getting sociology teachers whom you regard as properly qualified?" Of 112 replying, 61 said, "Yes"; 39, "No"; 12, "Don't know."

It is apparent from the returns from those actually teaching sociology that there is a great undersupply of properly equipped sociology teachers. It is also plain that the men who think that they

TABLE III
QUALIFICATIONS MENTIONED AS DESIRABLE FOR SOCIOLOGY
TEACHERS

	Frequency
College courses in sociology.....	26
Sociology major.....	22
Background in social sciences, social science major and minor.....	18
Sociology minor.....	17
Good sense, maturity, balance, judgment....	17
Tolerance, open-mindedness.....	16
Wide life-experience.....	16
Field work.....	11
Wide general knowledge of social problems, local and national.....	8
Teaching experience.....	7
Strong personality.....	6

will have no difficulty in getting properly qualified teachers have either very low standards or very little knowledge of the facts. If sociology in the high school develops as rapidly in the future as it has in the past—the data indicate that it will—the present undersupply of properly trained teachers will become a more and more serious educational problem.

Quotations from two men in the field are a propos.

There are very few teachers doing high-school work in the state of Washington who are properly qualified at the present time to teach sociology, but a beginning should be made at once.

There would be a continually decreasing difficulty in getting such teachers if the colleges which train teachers would insist that all candidates for teaching positions in any social science be required to include two or more sociology

courses in their course of study and if superintendents would insist that their sociology teachers fulfil these requirements. I suggest that the University of Washington add a course in rural sociology to its curriculum.

CONCLUDING STATEMENTS

Sociology in the Washington high schools has developed very rapidly during the last five years in spite of financial and curricular difficulties. A large proportion of the administrators replying are convinced that the enrolment in sociology courses will increase rapidly in the future; 80 of 112 think that sociology should be a required subject, and the remainder think that it should be elective. At the present time, the number of pupils in the high schools studying sociology is greater than the number of students in the University of Washington studying sociology.

The lack of teachers properly prepared to teach sociology is clearly brought out by the investigation. The consensus of opinion among those replying is that a teacher of sociology in the high school should have at least a sociology minor in college; a goodly number would require a major.

The emphasis on "problems," almost universal in the high school, is adversely criticized in this report.

It is probable that the University of Washington will be called upon to furnish a considerable number of sociology teachers in the not distant future. In addition to the high schools, the private secondary and higher educational institutions, numbering four or five at least, the three normal schools, and the junior colleges which must be developed within a few years will afford positions for a great many additional teachers of sociology.

In view of the fact that sociology is gaining increasing prominence in the high-school curriculum, the University of Washington ought to exercise its influence to the end that real sociology be taught by properly trained teachers in place of the garbled sentimentalism and superficial radicalism which are likely to characterize the "social-problem" approach in the hands of teachers who know very little scientific sociology. If the present emphasis on social problems is continued, it is all the more imperative that teachers who have had special training in sociology should be provided.

PERCENTILE RANK IN INTELLIGENCE AS A PROGNOSIS OF SUCCESS IN ALGEBRA

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The study here reported was made in order to determine the relation between success in algebra and the scores made on standard intelligence tests by high-school Freshmen. It is based on the algebra marks made by fifty Freshmen in the Monticello High School, Monticello, Indiana, during the first semester of the school year 1925-26 and the percentile ranks of the same pupils in two intelligence examinations. The first intelligence test was given during the second semester of the school year 1924-25 when the pupils were in the eighth grade. The Mental Survey Scale No. 1, Schedule D, prepared by the Department of Psychology of Indiana University, was applied at that time. The second measurement of intelligence was made on January 6, 1926, by means of the Otis Self-Administering Test of Mental Ability, Higher Examination, Form A.

Literal marks were given for the work in algebra, but these have been assigned comparable numerical scores for the purpose of this discussion. The highest possible numerical value is 25. The numerical values, the percentile ranks in each intelligence test, and the mean percentile ranks in intelligence are presented in Table I. By observing the data, it may be noted that the difference in the percentile ranks in the intelligence tests is marked in a large number of cases. Usually a pupil ranks lower in the Otis examination than in the previous mental test, there being only two exceptions to this rule. Since this variation is consistent, the same factors must have operated as a cause in the case of all individuals; therefore, the mean of the two ranks of an individual may be assumed to represent a relatively close approximation to his standing with reference to the remainder of the group. This assumption is strengthened by the fact that the correlation (product-moment formula) between the Schedule D ranks and the Otis ranks is $.78 \pm .04$.

TABLE I*

Pupil	Score in Algebra	Schedule D Percentile Rank	Otis Percentile Rank	Mean Percentile Rank
1.....	25	70	70	70
2.....	25	57	40	48
3.....	24	93	84	88
4.....	24	58	50	54
5.....	24	94	86	90
6.....	22	86	70	78
7.....	22	29	50	39
8.....	22	93	58	75
9.....	21	50	40	49
10.....	20	95	73	84
11.....	19	65	28	46
12.....	18	65	35	50
13.....	18	90	32	61
14.....	17	96	75	85
15.....	17	50	26	38
16.....	17	27	16	21
17.....	17	65	22	43
18.....	16	42	20	31
19.....	16	49	15	32
20.....	16	60	29	44
21.....	16	38	27	32
22.....	16	30	5	17
23.....	16	43	36	39
24.....	16	67	30	48
25.....	15	68	17	42
26.....	15	91	50	70
27.....	15	87	34	60
28.....	15	57	15	36
29.....	15	55	50	52
30.....	15	74	16	45
31.....	15	43	27	35
32.....	14	65	30	47
33.....	14	47	14	30
34.....	14	67	55	61
35.....	12	30	10	20
36.....	12	14	4	9
37.....	11	51	35	43
38.....	10	35	17	26
39.....	10	38	15	26
40.....	9	33	9	21
41.....	8	43	15	29
42.....	7	27	1	14
43.....	6	6	7	6
44.....	6	75	31	53
45.....	6	70	45	57
46.....	3	43	14	28
47.....	1	30	5	17
48.....	1	43	17	30
49.....	1	43	14	28
50.....	1	41	35	38

* Median score in algebra, 15.9; median percentile rank in intelligence, 41.25.

The question with which this article is particularly concerned is the extent to which success in algebra as indicated by teachers' marks may be predicted by the percentile rank as determined by mental tests. The correlation between the scores in algebra and the mean percentile ranks in intelligence is $.60 \pm .06$, as obtained by both the product-moment formula and the Spearman rank-difference method.

While the correlation between the scores in algebra and the mean percentile ranks in intelligence is high, a study of Table I shows variations which are significant. Eight pupils who made scores in algebra above the median (15.9) ranked below the median of the mean intelligence ranks (41.25), while ten pupils scoring below the median score in algebra ranked above the median in intelligence. In other words, 36 per cent of the pupils did not rank in the half of the algebra class indicated by their performance on the intelligence tests, while 64 per cent made scores in algebra comparable in rank with those made on the mental-ability examinations.

It is evident that there are factors other than percentile rank as determined by intelligence examinations which affect scores in algebra, but predictions of success may be made with a high degree of accuracy on the basis of such ranking. The minimum percentile rank in intelligence which will insure successful work in algebra can be stated only after the minimum desirable score in algebra has been agreed upon. If we arbitrarily assume that the upper three-fourths of the scores in algebra are satisfactory, it is found that 89 per cent of all pupils with a mean percentile rank in intelligence above the first quartile of the group studied (29.5) have done satisfactory work. Therefore, one seems justified in reaching the conclusion that, of one hundred pupils with mean percentile ranks in intelligence of approximately 30 or more, eighty-nine will succeed and eleven will fail in algebra. It is difficult to determine just which eleven will fail, but it is probable that a careful study of interests, industry, and school marks secured in the elementary school will reveal the 11 per cent.

What are the chances of success in algebra for those pupils with low percentile ranks on the mental tests? Further study of the table shows that, of all pupils with a mean rank less than 30, only 31 per cent received satisfactory marks in algebra and only about one-half

of these achieved average success. In other words, approximately one-third of such pupils make passing marks, while only about one-sixth of them rise above mediocrity. Probably this one-third may be determined by a consideration of the same factors which will foretell the failure of the 11 per cent of high mentality.

It seems reasonable that, with an increased use of mental tests, success in algebra, as well as in other subjects, may be predicted with a high degree of accuracy. When this becomes a complete realization, every pupil who attends school may be pushed to his intellectual limit, and none will be urged to do the impossible after this limit has been reached. This will insure each one as much benefit from school attendance as it is possible for him to derive. Then, and not until then, will our educational system be truly democratic.

Educational Writings

REVIEWS AND BOOK NOTES

A study of social institutions.—In his recent work¹ Professor Judd has given us an important and, at the same time, novel presentation of the history of human culture. His treatment of institutions differs from that of the sociologists, who are interested chiefly in the regulated relations of individuals, such as the family and the state, through which social control and order are maintained. Professor Judd's "institutions" also deal with social control but in a more fundamental sense, namely, the control of individuals with regard to the natural objects of the world in which they live. Institutions are the co-operative products of human ingenuity, such as the number system, the alphabet, the time-piece, the calendar, and weights and measures, devices which on the one hand materially alter the primitive or instinctive relation of man to nature and on the other hand change the course of the individual's personal mental life, bringing him into conformity with the social pattern.

The first institution discussed deals with the use of *tools*. The process of tool construction is described by Professor Judd as a distribution of the primitive hunter's attention between the object, or prey, and the means of obtaining it. Later, attention became centered on the tool itself, and a class of artisans developed whose interest was solely the making of tools or weapons. The use of tools has had a further effect on civilization in stimulating search for mechanical principles. There thus occurs a situation which, according to the author, is completely removed from the simple instinctive and emotional responses of individual psychology. We look in vain to the innate tendencies to understand the influence exerted on human nature and society by the use of tools. It is to be noted that the author's general point of view is here predominantly introspective. If behavior instead of the conscious pattern of attention had been considered, it seems he might have defined tool-making as a modification of the efferent portion of the innate hunger, or food-getting, reaction. Such an account would have involved the prepotent (innately grounded) responses of the individual more fundamentally than Professor Judd has been willing to admit. The later specialization of the tool-maker's vocation and industry would then be regarded as a means of satisfying instinctive wants through socially recognized and accepted division of labor.

¹ Charles Hubbard Judd, *The Psychology of Social Institutions*. New York: Macmillan Co., 1926. Pp. x+346. \$2.00.

A lucid account is given of the development of systems of exchange. "The coin," Professor Judd significantly says, "was built up by human co-operation and depends . . . on mutual confidences" (p. 48). Coinage, in particular the use of paper money, involves also the social acceptance of such ideas as governmental authority and responsibility. The historical treatment of the use of natural objects, metals, and various commodities as mediums of exchange, beginning with simple barter and ending with the acceptance of such highly abstract, substituted mediums as the dollar bill and instruments of credit is full of interest for the psychologist and the teacher.

Professor Judd defines the attitude of the individual toward all the institutions as one of *expectancy*. Enumerating commodities, weighing or measuring them, telling the time of day, and the like are activities in which the individual expects that others will act in a definite and commonly accepted way toward the objects in question. The conscious counterpart of expectancy, according to the author, is *habit*; yet habit does not tell the whole story. For example, the master expects the servant to address him in a certain (that is, habitual) way, but this habit is not in the master. He has only the expectancy, which must be fulfilled by the regulated behavior of the inferior. It seems to the reviewer, however, that, after all, we are dealing merely with habit or, rather, with two different sets of habits—one in the attitude of the master and the other in the attitude of the servant. There is no need for placing "expectancy" in a category of social existence detached from individual human beings.

The psychology of number is a field for the similar development of the importance of the social institutions. Primitive number systems began with the use of the fingers and for a long time did not advance beyond a very few numerals. The use of zero, a highly abstract concept denoting merely position, developed late and met with much opposition. Through the use of numbers modern minds are capable of types of abstract thinking impossible to primitive man, who is interested only in the separate details of nature. Again, the number system has developed so that modern man is dominated by it. The child is born into an environment in which the use of such a system is an established fact. He understands nothing about its derivation but accepts it in the same objective way in which he accepts the institution of money or natural objects, such as rocks and trees. The use of a number system made possible the development of methods of precision in measuring linear quantities and weights. There is here also a dependence on simple natural objects, such as grains of wheat and parts of the body. It was only at a much later time, largely through the need of scientific accuracy, that individuals were set aside to establish precise standards for the measurement of quantities. Throughout history, rulers and government officials have had difficulty in compelling uniformity among different peoples and localities in the use of these measures. Another institution depending on a numerical system is that of punctuality. Methods of reckoning and indicating time, beginning with the use of simple natural phenomena, are traced in their development down to the advent of the modern timepiece. The chapters on the

alphabet and language contain interesting though fairly familiar material. In both these forms the course of evolution has been from the concrete gestural or graphic representation of objects to the highly abstract elements denoting the mere conventionalization of sounds (in the alphabet) or the mere relation of objects (in language). There is a good discussion of the gradual change in the meaning of words. Other institutions treated are music, graphic art, and, in a somewhat sketchy fashion, religion, government, and science.

This unique collocation and historical treatment of the separate elements of the basic culture pattern provides a perspective from which certain important generalizations can be seen. There are two main propositions which Professor Judd derives from the treatment of his data. The first deals with the psychological (mental) nature of institutions. Institutions, such as money, for example, have been regarded by some as having a content only in economics or in other social sciences and not in the science of human nature. Issue is therefore taken with the economist, who treats of the development of money purely in terms of finding materials most suitable for use from the standpoint of durability, scarcity, and divisibility. These external materials, says Professor Judd, are only symbols. The essential nature of money is to be found in the habitual attitudes of confidence or acceptance which make possible the use of these materials as mediums of exchange. Similarly, the growth in the circulation of periodicals and newspapers in recent years is to be explained by the wider development of habits of reading throughout society, that is, by psychological factors, not, as some culture determinists would state, by the improvement of the printing press and facilities of transportation.

The second generalization of the author is that these great developments of culture become so thoroughly adaptive in their nature and so universally accepted that *they*, rather than the instinctive or biological factors of the race, become both the determinants of social development and the means of molding the point of view of the individual and of equipping him with the very tools of thinking. "Individual psychology," according to Professor Judd, "since it ignores these institutions, is inadequate in explaining society or even the individual himself."

It will be evident that the stressing of both these points of view at the same time may lead to inconsistency if care is not taken. To stress the psychological nature of institutions is to emphasize the importance of the individual, since psychology cannot be intelligently discussed without thinking of it as the consciousness or behavior of some individual. The institutions thus have their reality from a standpoint of scientific explanation in the large number of separate individuals. On the other hand, the strong emphasis on the study of institutions in themselves, as dealing with an important and neglected field of study, can easily pass over into an insistence that we accept them as separately existing phenomena, which, as if from the outside, mold the individuals of the group into conformity. On the one hand, therefore, the *individual* is emphasized as the causal factor; on the other hand, the *institution*.

That Professor Judd has fallen into this dilemma seems forcibly evident at

various points throughout the book. An example of this occurs in an otherwise valuable chapter dealing with the maladjustments between the advanced cultural institutions on the one hand and the primitive and unchanging instinctive and emotional reactions of the individual on the other. The solution of the problem would seem to lie not in the artificial separation of these two elements but in trying to bring them into some relation; in other words, in conditioning the prepotent or instinctive drives of the individual in such a way that they could have satisfaction within the present complex social situation. In doing this, it is clear that we must work with both the demands of modern institutional behavior and the innately grounded responses of the individual. The institution as such becomes a kind of environment to which the individual must be adjusted through mechanisms peculiar to his biological nature. It is not a substitute for these mechanisms. The reviewer feels that part of this dilemma might have been avoided had the author given more attention to the face-to-face behavior of individuals in the primitive situations in which the cultural institutions were developed, in situations such as the earliest instances of communication, barter, or exchange. He has dealt effectively with similarities of behavior, as shown, for example, in situations in which all individuals respond in the same way to a natural object, but he has left untouched the field of face-to-face social behavior from which these uniformities must have developed. To have taken into account this direct give-and-take of primitive individuals would undoubtedly have revealed the intimate relation of the development of the institutions and of social control to the satisfaction of the instinctive needs of individuals both in primitive society and at the present time.

The relation of the development of institutions to educational practice, which forms the closing chapter of the work, is full of interesting possibilities which the reviewer wishes might have been developed further. "No consideration," says the author, "of individual traits, however comprehensive, can explain what goes on during the educational process. That process is one of transforming individuals so that they will conform to social institutions" (p. 340). He advocates the teaching of the common branches, which is in reality the fitting of the individual into the institutions of society, not as mere tables of numbers or letters but as carriers of the complex social situation of which they are the expression. This would seem to imply the desirability of taking the elementary pupils through a course, simplified to be sure, similar to that presented in Professor Judd's book. This is an excellent suggestion and well worth experiment as to how it could be done. The reviewer, however, wonders whether this procedure would not accomplish a result opposite to that described by Professor Judd as the process of education. When the child learns that the "dollar" and the "yard" are not primordial facts of the universe but simply conventions or ways in which individuals react to a certain standard of coinage or linear measure made out of some imperishable material by experts and maintained by methods of precision, he will not be easily inclined to the acceptance of these institutions as sacred things. It is true that he will tend to conform in their usage because he

will not be able to satisfy his wants through social living if he does not conform. He will also be on the alert to challenge these conventions and suggest changes whenever such changes seem to be to his advantage or to the advantage of others. This statement would probably not apply to such relatively permanent and useful inventions as our numerical, linguistic, and time systems. It would apply to the more complex type of institutions, somewhat neglected by Professor Judd—for example, religion, the family organization, industry, and the state. A realistic attitude toward these institutions would have the effect of minimizing their potency for social control, of breaking them up, and of establishing new adjustments productive of greater individual freedom. Most of us would probably agree that this would be a desirable result. The teaching of the common branches, therefore, as products of co-operative behavior rather than eternal laws not only would arouse interest in children but would develop a critical insight which might lead in the end, though in different fields, not to the process of inducing conformity but toward *individuality*, which is the goal opposite that which Professor Judd describes as the essential social process.²

FLOYD H. ALLPORT

SYRACUSE UNIVERSITY

Counsel in college selection.—To fail to provide for a program of guidance in the high school is to neglect one of the most important opportunities in the secondary school. Since a large percentage of high-school pupils look forward to entering college, it is important that counsel be provided to guide them in choosing the higher school. Not only pupils in the senior high school but also many pupils just entering the junior high school are interested in the choice of a college. It may be said that the parents of the pupils are often more concerned about college selection than are the pupils themselves. Even though the high-school administrator recognizes that the choosing of a college may seriously interfere with the proper selection of courses during the high-school period, he must be willing to offer the best type of advice to pupils and parents who are interested in the matter.

A book³ has been published which is designed to aid high-school teachers and pupils in choosing a college. The purpose of the study was threefold. The author sought (1) to determine what information is necessary or important for a prospective college student, (2) to find out whether such information is available and, if so, how it may be obtained and organized for use, and (3) to assemble from a limited number of colleges such information as may be useful.

The book is divided into two sections. The first part treats the qualifications required for success in college and deals with the information that is

² A more analytical discussion of Professor Judd's book by the same reviewer from the standpoint of those interested in social theory is to be published in the *Journal of Social Forces*.

³ Florence Evans, *Guidance in the Selection of a College*. Philadelphia: University of Pennsylvania, 1925. Pp. 122.

thought necessary for proper college selection. The data for this part of the study were obtained very largely through the use of questionnaires sent to college professors, high-school principals and teachers, and pupils in the senior year of the high school.

The second part is concerned very largely with assembling and discussing the information relative to requirements for entrance into the colleges included in the study. Since the study is limited to colleges in the eastern part of the United States, it offers guidance only to such pupils as may be interested in these colleges.

The author has assembled a rather large amount of information, and portions of it may be very useful; yet practically all the information contained in the second part could very easily be acquired by teachers and pupils from the catalogues and bulletins sent out by the colleges concerned.

D. M. WIGGINS

Selections on American ideals.—In the study of literature there is a marked and growing tendency to substitute for the traditional unsystematic, haphazard perusal of unrelated selections a purposeful and orderly examination of collections of literary materials grouped about central, unifying themes. An example of this tendency is a volume¹ composed of selections from American literature, which, to quote the editors, "reveal the significant ideals of American life, and through which an understanding patriotism and a finer appreciation of the spirit of America may be upbuilt in high-school students" (p. iii).

The selections are grouped about the following topics: "The Stars and Stripes," "The Odyssey of the Pioneer," "The Land of Opportunity," "The Day's Work," and "American Ideals." In each division there are from five to fourteen poems, essays, stories, and narratives, ranging in length from a fraction of a page to thirty-two pages. The editors do not neglect the older writers, but they devote the larger part of their space to recent material. Representative of the selections included in the volume are "America the Beautiful" by Katharine Lee Bates, "Makers of the Flag" by Franklin K. Lane, "Westward Ho!" by Joaquin Miller, "A Wilderness Scout" by Stewart Edward White, "The Pony Express" by Mark Twain, "Life on the Prairie" by Hamlin Garland, "Industry versus Opportunity" by Roger W. Babson, "Carry On!" by Robert W. Service, and "A Little Kansas Leaven" by Dorothy Canfield Fisher.

Each reading is prefaced by a short account of the author's life and works and by either a description of the circumstances under which the selection was written or a comment on the character of the excerpt. Brief but well-devised "Helps to Study," consisting of questions, problems, and additional readings, are provided at the end of the volume. From the point of view of content, organization, and educational value, the publication is worthy of commendation.

HOWARD C. HILL

¹ *America's Message*. Edited by Will C. Wood, Alice Cecilia Cooper, and Frederick A. Rice. Boston: Ginn & Co., 1925. Pp. xii+348.

Extra-curriculum activities of the non-athletic type.—The author of a recent publication¹ has attempted to define the aims and the scope of the many groups and organizations in the modern high school. That there is a vast amount of club work in some of the schools is fully recognized, and many schools have sought to limit the number of extra-curriculum organizations which a pupil may join. By means of a questionnaire, the author ascertained the aims and the outcomes of the clubs in schools throughout the country, the amount of time devoted to them each week, and other facts.

In general, the aims of the clubs show a coherence due to life-interests. The outcomes are even more practical than are the objectives. In the case of a home club, some of the outcomes were knowledge of how to set a table properly for guests, knowledge of ways to entertain correctly in the home, ability to choose appropriate greeting cards, and ability to select harmonizing colors for dresses. A physics club enabled the members to build radios. A business club taught banking principles through the school bank. A foreign-language group was able to make use of the language for ordinary conversation in and out of class. The development of student government is probably of the most significance. One candid girl wrote, "After we had student government, I resented it when members of the class took advantage of the teacher's absence, when before I thought it was a good joke." According to one frank answer, the dramatic club satisfies one's inherent desire to "show off."

The opportunity to develop leadership by acting as an officer of a club is a privilege that varies. Some schools of large size have few clubs and little chance for training. Many schools evidently permit a pupil to hold only one office at a time. In an extreme case the twenty-five offices were held by six pupils. In general, the correlation between the number of opportunities for office-holding and the number of pupils holding office was more than .9. This is most encouraging.

The study has been carefully made. It presents an adequate and accurate picture of extra-curriculum activities and should prove most enlightening to a multitude of educators.

W. G. PIERSEL

An improved text in beginning Latin.—Since the publication of the general report of the Classical Investigation, there has been a need for new first-year Latin texts which are in harmony with its recommendations. A recent book² realizes many of the objectives outlined. The text is divided into two parts. The first contains one hundred lessons, which are intended "to provide a well-rounded, thorough, and interesting first-year course. The presentation of the subjunctive mood, deponent verbs, participles, and certain other topics is

¹ Quincy Alvin W. Rohrbach, *Non-athletic Student Activities in the Secondary School*. Philadelphia: Westbrook Publishing Co., 1925. Pp. 234.

² Walter Eugene Foster and Samuel Dwight Arms, *First Year Latin*. Richmond, Virginia: Johnson Publishing Co., 1925. Pp. xviii+352.

postponed to the second part of the book—the last twenty lessons” (p. v). In Part II is included the story of the Argonauts.

A new arrangement of material has been made. In an effort to develop independence in the learner, the exercises for translation are not presented on the same page with the forms and the vocabulary. Opportunity is provided for English word-study through several original devices for relating Latin to English. After presenting a new construction, the authors use it repeatedly in subsequent lessons until it becomes thoroughly familiar to the pupil.

The material offered for reading has been wisely graded, and the stories are, on the whole, interesting. There appear many well-known tales, chiefly of classical origin. The authors' extensive employment of disconnected sentences in the exercises for translation is an unattractive feature of the book. From seven to twelve of these isolated sentences appear in practically every lesson. Less reading material of this type and more connected Latin of very simple character in the earlier pages would make the book more nearly ideal for the beginner.

MARJORIE FAY

The problem method in college courses in school administration.—The problem method of instruction, which has been widely advocated, is being used more and more in both high-school and college courses. A number of textbooks in which the material is organized under the heading of a few projects, each involving a number of problems, have been produced for the secondary schools. However, relatively few texts similarly organized for college courses have as yet made their appearance. A text in educational administration¹ by Strayer, Engelhardt, and others is designed for the employment of this method in college classes.

The authors treat successively the following larger topics or projects relating to administration: “National and State Responsibility for Education,” “Local Administration of Schools,” “Financing the Schools,” “Business Administration of Schools,” “School Publicity,” “Statistical Methods Applied to Educational Problems,” “Buildings and Equipment,” “Physical Education and Health Service,” “Census and Attendance,” “Classification and Progress of School Children,” “The Organization of Local School Systems,” “Supervision of Instruction,” “Curricula and Courses of Study,” “Records and Reports,” “Extra-curricular Activities,” and “Personnel Management.” Under each of these general divisions, various problems, ranging in number from three or four to a dozen or more, are presented to serve as a guide to the student in analyzing the topic and in arriving at general conclusions. The problems used have been discovered in making school surveys or have been presented by school administrators seeking advice.

Each problem is stated in a concise paragraph at the opening of a new chap-

¹ George D. Strayer, N. L. Engelhardt, and Others, *Problems in Educational Administration*. New York: Teachers College, Columbia University, 1925. Pp. xviii+756.

ter or division of the text. It is followed by detailed data constituting source material, from which certain deductions may be made. At the end of the chapter are additional references to source material and also specific questions designed to lead the student to view his problem from many angles. Several problems may be selected at random for illustrative purposes. Under "buildings and equipment" the following problems appear: to plan a modern school plant that will not involve a greater expenditure of funds than a given city can bear, to estimate the number of pupils for whom accommodations must be provided in the future, to utilize a high-school building to the best advantage, to improve the engineering and janitorial service in a school plant, etc. Some of the problems presented under "supervision" are as follows: to formulate plans for a supervisory staff adapted to certain varying types of school situations, to make a list of proposals to be given to principals and supervisory officers in a school system, and how to select textbooks. One hundred and sixteen problems of similar character are presented in the text.

In the Introduction the authors suggest that the practice in problem-solving is to be accompanied, or should be accompanied, by various forms of laboratory practice. This would include the construction of graphs; the use of calculating machines, modern filing methods, and special instruments; and the reading and criticism of architectural plans. The authors say further, "It seems entirely probable that out of the experience which will follow this publication we may decide to change the form of some of the problems and to omit others in later publications" (p. vi).

On the whole, this work offers a comprehensive analysis and treatment of the field of school administration. Its greatest value would seem to lie in its use in classroom procedure in which students are carefully guided to a correct solution of the problems presented. The problems are of the most practical type, many of which every administrator encounters. The book is in no sense a ready source of information as to the best methods now employed in meeting these problems.

It seems to the reviewer that in some instances the general topics which are proposed are too comprehensive to be treated satisfactorily within the scope of a course in which the book might be employed as a text. For example, the topic, "National and State Responsibility for Education," requires as a background a knowledge of school law; if the class does not have such a background, considerable time will have to be spent in creating it. The same type of comment might be made concerning the topic, "Statistical Methods Applied to Educational Problems," and some of the others.

In general, the volume represents an immense amount of labor and care in selecting and organizing the detailed data used in connection with the questions presented. It is likely that it will satisfy a rather widely felt need for such a text and that it will be favorably received by many colleges and universities.

A. J. BRUMBAUGH

Interesting material for advanced French composition.—For the teacher who desires either occasional or continuous formal drill in difficult and idiomatic French composition, written or oral, a recent text¹ offers abundant material, well organized, informative, and interestingly developed on a trip-to-France theme.

The thirty assignments or "exercises," averaging three pages each, are divided into five groups. The sixth lesson of each group constitutes a review of the idioms and thought content of the five preceding lessons.

Each "exercise" is an entity, permitting any sequence that may be desired; it consists of a French model, a list of idioms appearing in either model or drill, and an English adaptation to be translated into French. The French section is easily adaptable to questionnaire treatment, which is left to the choice of the teacher. Since the text is not a grammar review, there are no grammar sections or references.

Approximately 1,800 words appear in each of the vocabularies, which are more or less within the range of daily experience. On the average, twenty idioms are apportioned to each lesson. These idioms form a substantial nucleus for the composition, which is of the conversational exchange type, with little formality.

Each "exercise," complete with model and idiom list, requires from two to three hours for adequate assimilation and preparation by an advanced class.

O. F. BOND

A conduct and study guide for high-school pupils.—The enormous increase in high-school enrolment, the enrichment and the broadening of the curriculum, the expansion of all the material facilities, and the multiplicity of extra-curriculum activities undertaken in the secondary school within recent years, with the consequent lessening of pupil and teacher contacts, have made it imperative that a brief, simple statement of desirable methods of study and conduct be placed in the hands of each pupil so that out of the complexity of his new experiences may come definite, confident, and appropriate reactions rather than incorrect and confused reactions. To meet this demand, a number of handbooks have made their appearance within the last few years. In the opinion of the reviewer, none of them fill the need so admirably as does the book² by Cunningham.

Three chapters are devoted to a discussion of the nature of character and to the principles underlying right conduct; the remaining thirteen chapters, comprising about three-fourths of the book, are concerned with a discussion of the meaning of study and a statement of the essential rules and principles involved in economical methods of study.

¹ William Wistar Comfort, *Practical French Composition*. Boston: D. C. Heath & Co., 1926. Pp. viii+152.

² William H. Cunningham, *Character, Conduct and Study*. New York: G. P. Putnam's Sons, 1926. Pp. viii+118. \$0.90.

The fundamental bases of character are considered from the standpoint of one's obligations to one's parents, teachers, fellow-students, and future self. Outstanding qualities or traits indispensable in the individual who would possess the highest type of character are implied in certain injunctions, which are designated by the author as the five imperatives: "Be honest. Be kind. Have courage. Work hard. Use your intelligence" (p. 10). The application of the general principles implied in these injunctions to concrete life-situations is discussed under such topics as personal cleanliness and conduct in classrooms, in corridors, at games, and on the street.

The author endeavors to emphasize the importance of study and to define the term in its broader and more significant meaning. "Study," as defined by the author, means not merely the reading of books but the collection of facts and ideas, the expending of energy or effort toward gaining power in various motor manipulations, the creation of some desirable piece of work by means of mind and hand, and the focusing of attention on ideas and objects in an effort to appreciate and understand them. Fundamental principles of study are then made available to the pupil under such appropriate and readily comprehensible topics as "See that All Physical Conditions Are Right for Study," "How To Memorize," "Use What You Have Learned," "Do a Little Pioneering Yourself," "Preparing a Talk," "Writing a Composition," "Studying Algebra," and "Translating."

The book is written in a simple, interesting style, and the salient points are stressed by frequent well-chosen topical headings. The material, which is unusually well organized, is treated in relatively short chapters. The book is thus conducive to clear thinking about the topics under consideration and is particularly suitable for high-school pupils. No high-school pupil can read the book thoughtfully without securing clearer ideas of character and conduct and a clearer conception of the fundamental principles of study. The book will serve its most useful purpose in the hands of the pupil, but, in the absence of such use, it will be of considerable value to the teacher as an outline for guidance in the systematic oral presentation of the principles involved.

R. S. NEWCOMB

CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY, AND PRACTICE

- ANDERSON, ELAM JONATHAN. *English Teaching Efficiency in China*. Shanghai, China: Commercial Press, Ltd., 1925. Pp. xviii+182. \$3.00.
- BARTLETT, LESTER WILLIAM. *State Control of Private Incorporated Institutions of Higher Education*. Teachers College Contributions to Education, No. 207. New York: Teachers College, Columbia University, 1926. Pp. 96. \$1.50.

- BOBBITT, FRANKLIN, with the co-operation of Paul L. Palmer, John A. Nietz, Irl H. Dulebohn, Genevieve K. Bixler, Clara H. Lorenzen, Sarah A. Bobbitt, Robert C. Scarf, Harvey C. Lehman, Clara A. Dyer, Harriet M. Mott, and Harold H. Postel. *Curriculum Investigations*. Supplementary Educational Monographs, No. 31. Chicago: Department of Education, University of Chicago, 1926. Pp. viii+204. \$1.50.
- CORNING, HOBART M. *After Testing—What?* Chicago: Scott, Foresman & Co., 1926. Pp. x+214. \$1.60.
- CROSS, E. A. *Fundamentals in English*. New York: Macmillan Co., 1926. Pp. xiv+526.
- CUROE, PHILIP R. V. *Educational Attitudes and Policies of Organized Labor in the United States*. Teachers College Contributions to Education, No. 201. New York: Teachers College, Columbia University, 1926. Pp. viii+202. \$1.50.
- DOUGLASS, HARL R. *Modern Methods in High School Teaching*. Boston: Houghton Mifflin Co., 1926. Pp. xviii+544. \$2.25.
- DRURY, SAMUEL S. *Schoolmastering*. New York: Macmillan Co., 1926. Pp. x+256.
- EMMONS, FREDERICK EARLE. *City School Attendance Service*. Teachers College Contributions to Education, No. 200. New York: Teachers College, Columbia University, 1926. Pp. xiv+174. \$1.50.
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- GRAY, WILLIAM SCOTT. *Summary of Reading Investigations (July 1, 1924, to June 30, 1925)*. Chicago: Department of Education, University of Chicago, 1926. Pp. 46. \$0.25.
- HINES, HARLAN CAMERON. *Finding the Right Teaching Position*. New York: Charles Scribner's Sons, 1926. Pp. vi+200.
- JONES, VERNON A. *Effect of Age and Experience on Tests of Intelligence*. Teachers College Contributions to Education, No. 203. New York: Teachers College, Columbia University, 1926. Pp. 74. \$1.50.
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- ORLEANS, JACOB S. *A Study of the Nature of Difficulty*. Teachers College Contributions to Education, No. 206. New York: Teachers College, Columbia University, 1926. Pp. vi+40. \$1.50.
- PRYOR, HUGH CLARK. *Graded Units in Student-Teaching*. Teachers College Contributions to Education, No. 202. New York: Teachers College, Columbia University, 1926. Pp. vi+114. \$1.50.
- REAVIS, WILLIAM CLAUDE. *Pupil Adjustment in Junior and Senior High Schools*. Boston: D. C. Heath & Co., 1926. Pp. xviii+348. \$2.00.

- Report of the Indiana Rural Education Survey Committee.* Indianapolis, Indiana: State Department of Education, 1926. Pp. 130.
- SCOTT, JONATHAN FRENCH. *The Menace of Nationalism in Education.* New York: Macmillan Co., 1926. Pp. 224.
- WILDS, ELMER HARRISON. *Extra-curricular Activities.* New York: Century Co., 1926. Pp. xii+274. \$2.00.
- WOOTTEN, KATHLEEN WILKINSON. *A Health Education Procedure.* New York: National Tuberculosis Association, 1926. Pp. x+420.

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- Across Borderlines.* Books of Goodwill, Volume Two. Compiled by Florence Brewer Boeckel. Washington: National Council for Prevention of War, 1926. Pp. viii+152. \$0.75.
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- BATE, WILLIAM G., and WILSON, ELIZA ANN. *Studies in Vocational Information.* New York: Longmans, Green & Co., 1926. Pp. iv+168. \$1.20.
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- CASTLE, DREW W. *Problems in Blueprint Reading.* Peoria, Illinois: Manual Arts Press, 1926. Pp. 88. \$1.44.
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- GUERBER, H. A. *Story of Our Civilization.* New York: Henry Holt & Co., 1926. Pp. xiv+408.
- GUITEAU, WILLIAM BACKUS, and WEBSTER, HANSON HART. *The Constitution of the United States: Its Origin, Meaning and Application.* Boston: Houghton Mifflin Co., 1926. Pp. xvi+216. \$0.84.
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- JORDAN, ARTHUR MELVILLE. *Children's Interests in Reading.* Chapel Hill, North Carolina: University of North Carolina Press, 1926 [revised]. Pp. 104. \$1.50.
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- MARSHALL, LEON C., and WIESE, MILDRED J. *Modern Business.* New York: Macmillan Co., 1926. Pp. xii+520.
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- Standard Catalog for High School Libraries.* Edited by Zaidee Brown. New York: H. W. Wilson Co., 1926. Pp. 272. \$2.50.

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AND OTHER MATERIAL IN PAMPHLET FORM

- ARMSTRONG, CAROLINE, and DANIELSON, CORA LEE. *Sentence Vocabulary Test: Form 1*. Los Angeles, California: Research Service Co. (4259 South Van Buren Place), 1926.
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